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Textile World

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Editor: Douglas G. Woolf

Resistance to High-Pressure Buying

OF all so-called "vicious circles," none is more vicious than the attempt to pass a trading loss from one group in an industry to the next.

Here is a case in point:

The merchandise manager of a chain-store group attempted to "bear" the price on a certain brand of rayon hosiery below the level set by the manufacturer as an irreducible minimum.

It was explained to the buyer that the mill had passed on to him the benefit of every reduction in the price of rayon yarn and every economy effected in manufacturing costs—and that, unless there was a further reduction in rayon, the hands of the mill were tied. (This was prior to last week's rayon price cut.)

The buyer countered with the suggestion that he (the buyer) write a letter to the manufacturer, which the latter might show to the rayon yarn producer, indicating that the mill stood a chance to lose this important business unless the price of rayon came down.

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On its face, this procedure seems simple enough. The buyer gets his hosiery at a lower price; the hosiery manufacturer protects himself by forcing the rayon producer to come down; the latter takes it out of the next man in the chain—and in the end, the consumer can buy his or her hosiery at a lower price.

However, the mill manager saw a flaw in the argument. His reply was that he owned no stock in any rayon company and was interested primarily in buying the best rayon at the lowest price; *but* that he believed in having some sense of equity and justice, and was inclined to the opinion that the prices of rayon were getting dangerously close to the cost of production—so much so that some of the largest producers were operating half-time and others were reported to have shut down indefinitely.

This *was* a just attitude, it is true, but it was also good business. It takes less than a profound knowledge of the principles of economics to know that no one—not even a consumer who owns stock in neither the chain store nor the hosiery mill nor the rayon plant—can profit, in the end, by a transaction which represents a loss to any one of the links in that chain.

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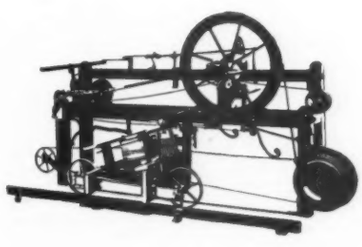
High-pressure buying is here to stay. The injection of scientific methods into purchasing has improved the tone of our entire structure. Sellers, put on the defensive, have been forced to take every step to increase efficiency and eliminate waste, in order to meet this type of buying.

But there is a limit, and every manufacturer knows—or should know—where that limit is. If he does not build up resistance to high-pressure buying; if he sells below a profitable level, even though he may be able to pass the loss along temporarily—he is committing economic suicide.



The Week in Textiles

Outlook . . .

SITUATION CONTINUES quiet. Raw cotton, which hit new low, is being closely watched by industrial leaders, many feeling that upturn in general business must be preceded by rise in commodity prices and that cotton will be the barometer. Government report, due Aug. 8, will be closely scanned. . . . . Cotton goods prices holding reasonably firm, considering the slack trading following the drop in raw cotton. . . . . Raw wool stays firm, but goods market still being readjusted. . . . . Hosiery in sounder position with lower priced lines expected to pick up before the more expensive variety. . . . . Raw silk trading held off awaiting July consumption report, due next week, and prices weakened 10c. Goods market more cheerful.

Cotton Consumption Drops . . .

SHARP CURTAILMENT in mill activity in this country and England is reflected in world cotton consumption figures for June, as reported by the New York Cotton Exchange Service. Total for June was 877,000 bales, as compared with 1,014,000 for May and 1,224,000 for June, 1929. . . . . Consumption for eleven months ending June 30, was 12,173,000 bales, representing a drop of 1,818,000 from the previous season. . . . . Estimate places indicated carryover at 900,000 bales above last five-year average of 5,254,000.

Merchandising Methods . . .

THE FIRST of a series of bulletins on modern merchandising methods, growing out of an investigation conducted by the industrial committee of the New England Council, is available this week. The survey of what progressive firms are doing was inaugurated last December in the belief that merchandising is the key to net profits in the present business situation. . . . . The series, consisting of six bulletins, is designed to allow the manufacturer to check the effectiveness of his methods, the first dealing with the industrial product, its design, use and suitability for customer's needs. Tools of merchandising, sales plans, selling costs, etc., will be dealt with in succeeding issues. . . . . W. S. Nutter, Goodall Worsted Co., Sanford, Me.; R. W. Sulloway, Sulloway Mills, Franklin, N. H.; and O. D. Gay, Gay Bros. Co., Cavendish, Vt., were among those on the committee conducting the studies.

N.R.D.G.A. Aids Viscose Quality Plan . . .

FOR THE purpose of furthering the quality-control plan of the Viscose Co. arrangements have been announced between the company and the Better Fabrics Testing Bureau of the National Retail Dry Goods Association, whereby manufacturers of rayon underwear, undergarments and night wear must first secure the endorsement of the bureau, on the score of meeting specifications for cut and size, before application to use the "Crown" brand labels. The bureau will also make periodical checks. . . . . Object of plan is the protection rendered company, manufacturers, dealers and the ultimate consumer, since contract-agreements cannot be entered into until the impartial bureau has approved cloth construction and cut. . . . . Arrangement is the first of its kind to be handled by bureau.

The Business Outlook

"Exactly a year after business scaled the peak of its 1929 boom it is reaching its low in the subsequent depression. Our index has dropped again, from 94.4% of normal to 91.1%, as compared with the high point of 114.6% a year ago, and will probably fall farther next week. . . . August will bring signs of improvement, beginning with the basic industries, and as we move further into the last half, the paralyzing pessimism of recent months will find less to feed on in the comparative records of this year and last. . . . While general trade is beginning to sag under the pressure of months of impaired purchasing power and business confidence, industrial activity and railroad movement of merchandise show signs of revival under the stimulus of depleted stocks, and non-agricultural commodity prices are strengthening. . . . This is the decisive round in the fight with the forces of deflation."

—The Business Week

Our Trade With Canada . . .

CONSERVATIVE VICTORY in Canadian elections brings to forefront possibility of retaliation against recently enacted United States tariff law. Conservatives are pledged to high protection and increase in Empire reciprocity. . . . . Our textile exports to Canada, for the year 1929, are estimated at $24,000,000, excluding raw cotton. . . . . According to reports, 55 plants in textile and allied fields located in Ontario and Quebec have closed down due to inability to meet outside competition.

Lower Full Fashioned Wages . . .

A NEW WAGE agreement will be placed in effect immediately by members of the Full Fashioned Hosiery Manufacturers of America and the American Federation of Full Fashioned Hosiery Workers. It calls for average reduction of 18% in leggers' wages and also provides for two-job system by unionized help which means that union accepts principle of one knitter tending two machines. TEXTILE WORLD in July 5, 1930, issue predicted that average reduction would be 18%. . . . . New wage scale calls for reduction of 15% in single jobs and 22% for double jobs or knitters tending to two machines. All 18 to 20 section

full fashioned machines in popular gauges may be doubled immediately provided no employee is discharged and double jobs may be run with girl helpers instead of boys, up to 75%. Manufacturers will go on two shift basis of shorter hours to give employment to larger number. They will also set up unemployment fund for knitters out of work.

Cotton Statistics Changed . . .

EFFECTIVE AUG. 1, the New York Cotton Exchange will change the basis for weekly statistics on movement into sight, visible supply, exports and spinners takings of American cotton. Linters will be excluded except in detailed reports. . . . . Move is to simplify comparison of statistics and bring them in line with world practice. . . . . Details elsewhere in this issue.

Complete Wool Study Urged . . .

EXPRESSING dissatisfaction with the plan to investigate only cost production on infant's wear wool under the provision of the flexible tariff, the Carded Woolen Manufacturers' Association has addressed another letter to Senator Copeland requesting a study of the entire wool field. . . . . The association contends that western wool growers and eastern worsted spinners have dominated the writing of rates to the detriment of other groups. . . . . Senator Copeland's position is that the investigation on infant's wear wool will be thorough enough to bring out the facts on raw wool.

Wool Machinery Activity . . .

WITH THE exception of carpet looms and cards, wool machinery was more active during June than the preceding month, according to reports received by the Department of Commerce from 810 manufacturers. . . . . On a single shift basis, wide looms operated at 52.7% of capacity as compared with 51.2% for May; narrow looms, 47% against 39%; carpet looms, 35.8% against 44%. Woolen spindles operated at 61.9% for June as compared with 60% for the preceding month; worsted spindles, 56% against 51.5%; cards, 59.5% against 60.4%; and combs, 72% as compared with 67.7%. . . . . When compared with June, 1929, the drops in percentage points were as follows: wide looms, 12; narrow looms, 13; carpet looms, 34; woolen spindles, 10; worsted spindles, 8; cards, 15; combs, 6. . . . . In combination with the reports of the Wool Institute, published last week, these figures indicate that the wool industry has passed the low point.

Manville Jenckes Head Resigns . . .

ILL HEALTH has forced F. L. Jenckes to resign his position as president of the Manville Jenckes Co., Pawtucket, R. I., effective at once. Mr. Jenckes has been identified with the textile industry all his life and has been active as officer and director in several other concerns. . . . . Directors will meet the latter part of the month to name a successor.

Germans Plan C-T Institute . . .

AN INSTITUTE similar in scope to The Cotton Textile Institute will soon be set up in Germany, declares Dr. Hammer, secretary of the Central Association of German Cotton Weavers. Excessive competition in the export field which necessitates an advance in knowledge of the technical uses of cotton, such as that brought about by the Institute in the United States, is stated to be the impelling motive.

Curtail Materially . . .

DIRECTORS OF the Riverside & Dan River Cotton Mills, Inc., have posted a resolution, passed at a recent meeting, authorizing the management to materially curtail production for the next 30 or 60 days in view of present market conditions which call for a decline in stocks. . . . . It is understood that mills Nos. 3 and 4 of the Dan River division have been closed temporarily, and further curtailment may follow. . . . . Production and sales of the company for first six months, 1930, were ahead of last two years.

Textile Industry at Crossroads

After we had unburdened ourselves of this week's editorial, pointing out the "vicious circle" resulting from buying pressure exerted by one member of the textile trade upon another all down the line, there came across our desk a public announcement by Morton M. Meinhard & Co., Inc., New York, which substantiates this argument in a most convincing way:

"The textile industry is at the crossroads," states this company. "It must be changed to a policy of 'live and let live' or all arms of the service will become so mediocre, so weak, that the entire industry—from the producer of the raw material to the retail distributor—will find that their ammunition has not the power to hit the bull's eye of success and prosperity. On the other hand, if all buyers would change their tactics, by giving all branches a living wage, we could resurrect the industry into something virile and worth-while . . . . .

"If the present 'dog eat dog' policy is continued, how long will it be before the users of cloth find that their source of supply is stunted—that they neither have the new fabrics, nor the styles and colorings that are absolutely necessary to tickle the palate of the consumer. What a short-sighted policy for fine merchants; yet that is exactly the way this situation has drifted from the retailer's relation to the manufacturer of all wearing apparel, the manufacturer of wearing apparel to the manufacturer of his raw material, and so on down the line."

STAGING THE FIGHT AGAINST

Third Article in Series

How Pepperell Keeps Abreast of Machinery Modernization

Interviews by J. A. Austin with

H. R. Whitehead and *G. D. Harrison*

Agent, Pepperell Manufacturing Co., Biddeford, Me. — *Vice-Pres. and Gen. Mgr. Lewiston Bleachery & Dye Works*

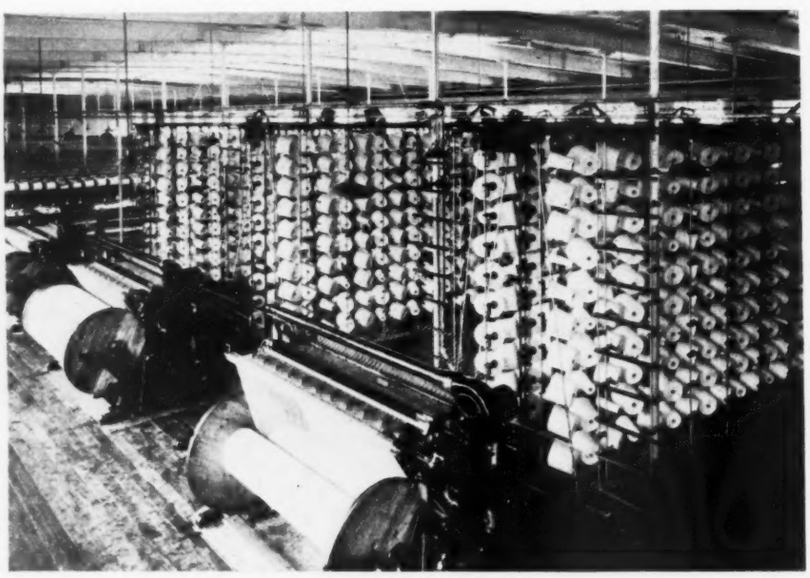
PEPPERELL MANUFACTURING CO. realizes that the constant changes which are being made in textile machinery require the mill management, more than ever before, to investigate the possibilities offered in more efficient production and better quality. With competitive conditions as they are today no textile mill can hope to survive long if it continues to run obsolete machinery. Consequently, Pepperell has spent large sums in replacing obsolete and worn-out machinery, and the end is not yet. Investigations and experiments will continue, and further replacements will be made when needed, for only in such a way can a mill be sure of producing materials of the proper quality which can be offered to its customers at a competitive price.

Biddeford Plant

The actual procedure followed in deciding upon machinery replacement is not complicated, but every care is used to avoid errors. The agent of the mill personally keeps in close contact with the machinery manufacturers and secures their cooperation in working out particular manufacturing problems. A new development is, first of all, investigated by all outside means, including where possible a view of the machine in actual operation. If it is determined that the machine offers possibilities, Pepperell, in the belief that different mills present different problems, prefers to conduct all future experiments in its own plant. To this end one unit of the new development is installed in the plant and all tests of the trial unit are made by Pepperell men.

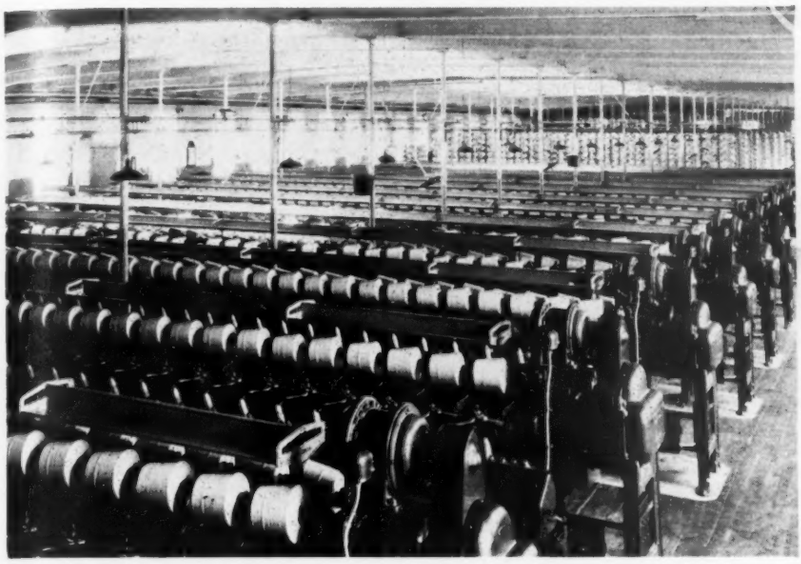
Time studies are made of the new machinery in comparison with the old. Occasionally as many as four or five lengthy tests are made by different time-study men until the management is convinced that correct results have been obtained. The studies are carried out for a period of time proportionate to the amount of money involved in the case of replacement, running up to fourteen months in one case where the expenditure considered was large. The effect upon the quality of the product is checked carefully at the same time.

When the time studies and quality determinations have reached a point where accurate figures are available for both the new and the old machinery, the actual decision is approached. First, the quality produced upon the new machine must be at least the equal of the old, and should be better. Next, the intangible items such as versatility, accessibility for repairs, working conditions, etc., are given consideration. Finally, the actual savings in direct



High-speed warping department

WEAR AND OBSOLESCENCE



View of No. 60 G-F winders in Pepperell plant

labor, indirect labor, and overhead items are examined and a decision made accordingly. In general a saving of more than 10% is considered necessary to justify replacement.

As a result of experiments conducted in this fashion, the Biddeford plant has made, during the last year, the following major installations: single process picking; long-draft spinning on all spindles where the product made it advisable; new temperature control on slashers; 80,000 new wide-gage spinning spindles; and new dye-house for package, beam, and raw-stock dyeing.

At the present time experiments are being conducted with long drafting on slubbers, intermediates and fly frames. What the results will be is not known at this time and no preconceived opinion is held, one way or the other; the results of the tests will speak for themselves.

Although the above represent the more spectacular features, every operation in the mill is subjected constantly to scrutiny, for even such items as the installation of scrubbing machines play a part in keeping a plant modern. Hand in hand with the study of equipment has gone a study of the work performed by the operatives. To secure the maximum advantages of a modern plant the skilled operative is required to perform only such operations as require skill, and the other work is done by unskilled workers. Piece rates are used wherever in any way possible.

Replacement Parts and Repairs Recorded

The item of replacement parts and repairs is an important factor. The stock room, containing over 9,000 items, is run on the principle of a store, a perpetual inventory kept and every item charged to the proper department. As an example, each loom fixer is charged with the parts and repairs which he uses. This develops a friendly spirit of competition among the men to give their machinery that constant care which cuts down repair costs, but the greatest benefit of such a system is that excessive parts and repair costs can be spotted immediately and investigated. Often it is found that it is cheaper to purchase a new machine than continue to buy replacement parts.

Machinery manufacturers are today more alert than they have ever been. They spend more time listening to what the mills have to say about their problems and really collaborate with them. They do not hesitate to spend money for research and, as a result, have made remarkable strides since the war and will so continue.

The net result of the machinery changes which have been made at the Biddeford plant, along with the rearrangement of the operatives work, has been a saving of hundreds of thousands of dollars annually and a better product.

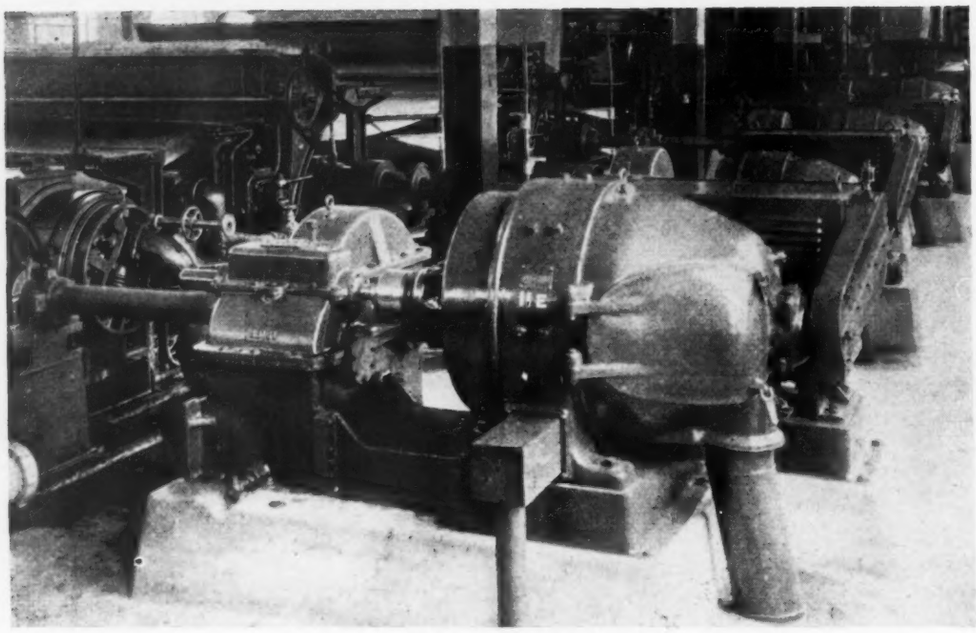
Lewiston Bleachery

WEAR and corrosion are constant enemies of the bleachery and dye works and the fight against them goes on day after day, but the factor of obsolescence is difficult to gage or anticipate with the same accuracy.

Repairs must be made constantly if the plant is to maintain quality and efficiency and it is highly desirable that these expense items should be handled in such a way that the management knows exactly what has been done. Consequently, at the Lewiston Bleachery and Dye Works, records are kept for each machine, or for each group of machines where more than one is in use, and guesswork is eliminated in the cost factor.

Much of the progress of a finishing plant is along chemical lines and by the development of new methods rather than upon actual machine changes. New machinery, however, is followed closely and the possibilities for the plant investigated. In addition to the domestic field the progress of the foreign machinery manufacturers is scrutinized carefully. Usually at least one member of the organization is in Europe each year and anything which seems to offer possibilities is re-

(Continued on page 84)



Sectionalized drive showing each of ten sections of a paper machine driven by individual d.c. motor. Installations similar to this have been made in textile mills

Electrical-Maintenance Engineer—A Plant Physician

By R. H. Rogers

*Industrial Engineering Dept., General Electric Co.**

IT IS said that a man is as old as his arteries—of manufacturing plants it can be said that they are as old as their electrical equipment. In a man old age is inevitable, but in a manufacturing plant worn or obsolete equipment can be replaced to prolong the period of active life. In some cases, however, the plant buildings or their location may become obsolete, or worse yet, the product may no longer meet a popular demand. In such cases no amount of rehabilitation can stave off the end.

One writer recently tersely stated that every plant has two junk piles, one outside the walls and one inside the walls. The size of the inner junk pile can be kept down by the maintenance men whose primary business it is to keep things from happening. Only slightly less important is their function of recommending modernization, for no one in the organization is in better position to see what is needed and when it is needed to hold obsolescence down to a figure that will insure a reasonably long life for the plant.

Obsolescence Imposes Handicap

Suppose some major equipment is put in today and that it is the best procurable for the purpose—call that par or 100. Depreciation starts immediately, but its progress will be slow or fast according to the diligence of the maintenance forces; to check it to a standstill is impossible. In a period of ten years its condition may be called 90, or 10 below par. In the meantime that class of equipment has been improved and a competitor installs it. That equipment may well rate 140 on the old basis, or 50 points better than the ten-year old equipment that is still going strong.

Obsolescence has done its work four times as fast as depreciation. Electrical-maintenance men should keep a sharp eye on this phase of plant ageing, and should, by letter and sketch, make pertinent suggestions on ways and means to keep up perpetual rejuvenation.

Electrical men connected with the industrial world are in a strategic position to foster modernization at least to the extent of making it possible for a plant to hold its own; and in many cases, keen concerted action on the part of the electrical forces have shoved an institution up among the leaders in its line.

That is the broad view to take: know what is the best, what trends are, press relentlessly for modernization, install conscientiously, and maintain intelligently.

Maintenance may be of the "main-strength" type, where without question the same sort of repairs are made over and over on the same units. The units are kept going, it is true, but at high cost. We are prone to become "mill-blind" unless we specificially guard against it. Shop troubles can repeat themselves until we are

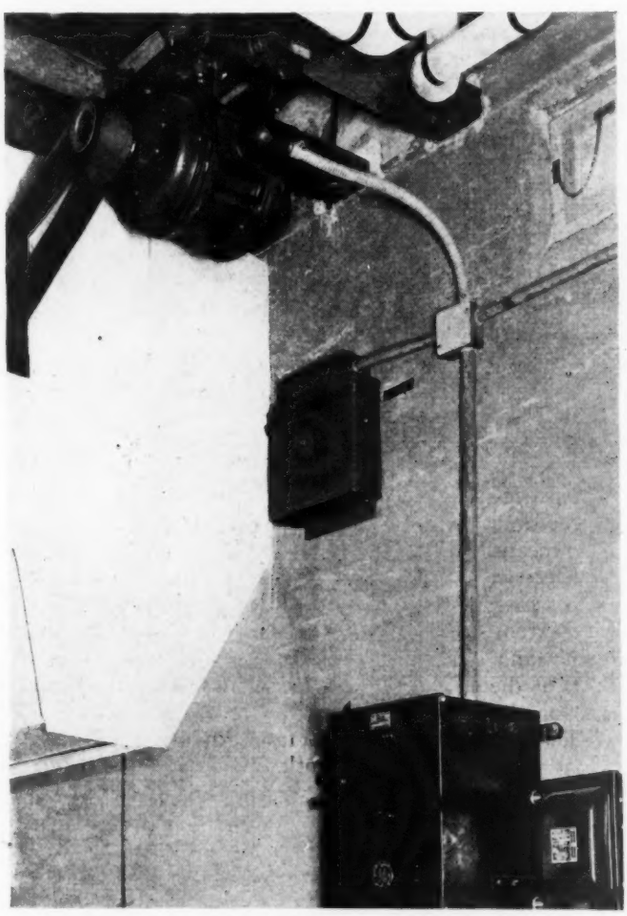
**A paper presented at the Electrical-Maintenance Engineers' Convention, Cedar Point, Ohio, June 19, 1930.*

calloused to them, and we assume without question the routine of making certain repairs or replacements periodically.

Intelligent maintenance implies that thought will be given to the cause of every failure which leads to maintenance expense. The unit in trouble must be studied first; and if no cause is apparent, the search must extend both ways from the trouble point until the cause is run down and eliminated once for all. This latter procedure is especially applicable to electrical equipment. Take, for stance, a case of motor trouble; perhaps the second occurence. A study of the motor should include its starting duty, peak loads, average heating load, power factor, and general behavior. If the motor has the proper characteristics for its work, the examination should narrow down to physical and electrical conditions. If the cause of the trouble is not found here, the investigation should be extended to the driven load to determine if erratic conditions can occur to throw destructive loads on the motor. The power supply and control items should be investigated. Some inexperienced person may be mishandling the equipment. Voltage dips from some remote cause may be the offending item. The control equipment may not be adapted to the application.

Periodic Studies of Equipment

Periodic studies should be made of electric-power equipment because improvements are being made all the time by manufacturers. A type of equipment unsuited to a job five years ago may be the ideal unit today, while on the other hand, the accepted standards of a few years ago are obsolete now, and newly fitted out plants are being benefited by the improved designs and higher standards of the present. Any motor or control over five years old should be coldly scrutinized for present-day fitness, so rapid has been electrical-design progress. How is the management to know when to modernize or how, except by the suggestions of those closely in touch with things as they are and as they should be?



Adjustable-speed capacitator motor driving heating and ventilating fans

Don't be complacent; don't be satisfied with things as they are; competitors are not. Have ideas about improving electrical conditions, push them, put them in writing, in sketches. Many schemes teeming with potential benefits have died in the heads or desks of the schemers because they were not brought out forcibly enough. Some may be too modest to bring their notions to those higher up, while others become discouraged at the first belittling comment. Worst of all is the "main-strength" maintenance man who takes the attitude that he is not being paid to improve conditions and maintains that he is there simply to keep things running as they are.

Some of the trends in electric practice that are most responsible for obsolescence in existing equipment may be summarized to advantage.

Trends Responsible for Obsolescence

Synchronous motors have been so improved, particularly in starting characteristics, that they are now freely applied where but a few years ago induction motors were used. Synchronous motor control has also been improved in many ways. Full advantage can be now taken of the power-factor improving characteristics of synchronous motors, together with their inherent adaptability to low-speed drives. The substitution of synchronous for induction motors at certain key points in plants has materially helped the normal operation of all the other electric apparatus, and has made it possible to add much needed motor loads within the heating capacity of existing transformers and feeders.

Time-delay undervoltage relays on all large motors are helping to maintain continuity of service. They allow motors to coast through voltage dips of short duration and save wear and tear on the whole system which results from wholesale restarts after a momentary outage.

The wide and growing use of generator-voltage (Ward Leonard) control for d-c. motors in the presence of a-c. supply has done much to reduce manitenance and increase production. It is agreed that a d-c. machine may have a higher maintenance cost than that of a squirrel-cage induction motor, but considered overall—control, motor, driven machine—lowered maintenance cost is often the determining factor in favor of the d-c. generator voltage-control system. This statement, of course, applies only to such duties as call for the characteristics of this type of drive. An example is the power shovel. It can be driven by a single or several a-c. motors. It can be driven faster with less lost time and less maintenance cost by d-c. motors under generator voltage-control, in spite of the fact that an a-c. motor is still required besides a d-c. generator for each motion. The same is true of some twenty other applications common to industrial operations.

Modern Design and Construction

Among minor items are the more general use of indestructible one-piece winding for squirrel-cage induction motors; improved bearings, which have longer life and furnish better protection against the transfer of oil to the windings; and the general practice of extra bracing

of coils to withstand the stresses of full-voltage starting.

The practice of full-voltage starting of motors has been extended to very large sizes, 3,000 hp. in one case and very commonly to 500 hp. This practice involves simpler starting devices and consequently less maintenance—provided the driven machine does not suffer from the mechanical shock that the quick start may inflict upon it.

Recent Improvements

Standard listed motors today are better protected from water, humidity, acid and alkali fumes, and abrasive dusts than were the "special" motors of a few years ago. Research in these matters has resulted in the production of age-resisting insulations and better manufacturing procedure, thus producing better all-around units for all classes of electrical service.

Lightning protection has been the subject of much study; and progress in keeping with the efforts expended have been made. Today, for instance, the transformer is practically lightning-proof and outages from lightning surges are becoming more and more rare.

Improvements in the design and construction of electrical units have carried with it corresponding improvements in spare parts, especially so in the case of insulated parts which can now be kept in stock for long periods without deterioration.

Brakes and braking systems have changed for the better in many respects. Brakes themselves require much maintenance and are often the unsuspected cause of maintenance expense in motors and driven machines. Alternating-current solenoids are now hardly used; electric-hydraulic brake releasers, are taking their place. Motor generators are furnishing direct current to brake solenoids in many cases where a-c. solenoids were formerly used. Dynamic braking and regenerative braking are stopping thousands of shafts where formerly brake bands and wheels were being worn out.

Power-Factor Improvements

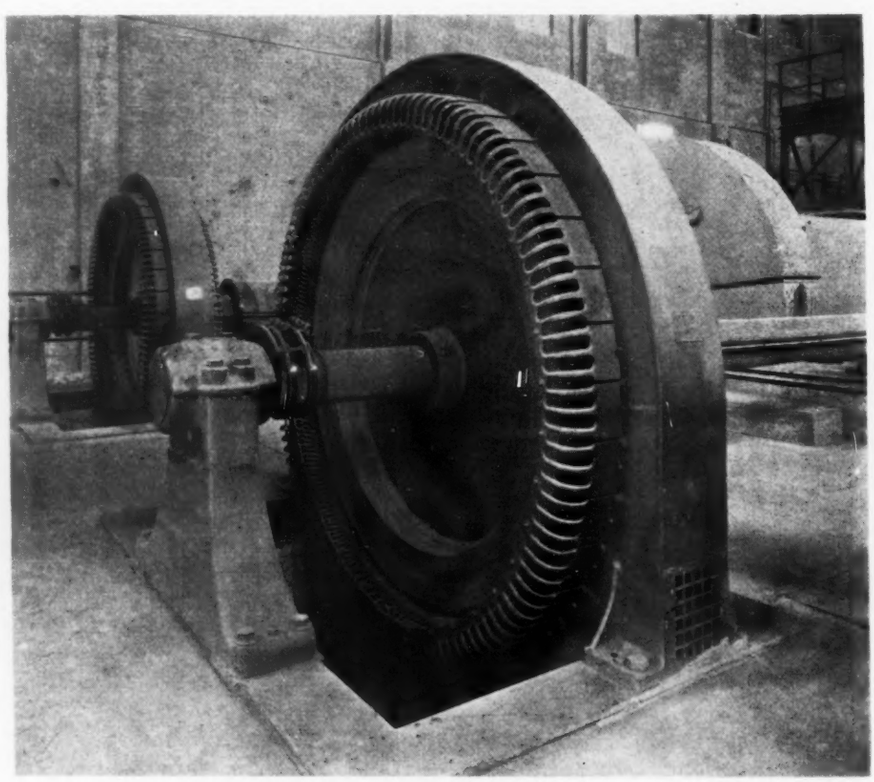
Power factor improvements present one of the most fertile fields for inside investigation. Additions, transfers, and substitution of units can be plotted graphically to determine the effective means for power-factor improvement with little expense. By such procedure one may find ways to better electrical conditions within the plant and often advantage can be taken of the power-factor clause in the power contract. Means for improving power factor are found in the use of high-speed, fully loaded induction motors, synchronous motors of unity or leading power factor, capacitors, or synchronous condensers. Simple automatic means are available for holding a predetermined power factor in a plant through thick and thin. Economies by power-factor improvement are well worth trying for because once in effect they accumulate to the advantage of the plant day and night, year in and year out.

Electrical men are thoroughly familiar with the ordinary problems of installation and maintenance. Instructions and standard practice take care of most of the troubles that arise. It would be superfluous to argue these experts to be sparing of oil, to blow the dust out of electrical machinery, to check air gaps, and to carry on the thousand and one services that are conducive to continued operation.

On the other hand, if the broader spirit of scrutiny, which makes each unit prove its own merit, can be popularized, something worthwhile will have been accomplished. Therefore approach each unit in the plant as though it were a perfect stranger, imagine meeting it for the first time; look up its past records. Trade units around so that there will be fewer "square pegs in round holes." Make everyone miserable up the line until the wrong things are made right. Thus electrical-maintenance men may be most instrumental in keeping the plant at least up to its present status with competitors.

While Lewis Carroll put a lot of nonsense in "Alice in Wonderland" and in "Through the Looking Glass," he forcefully brings to mind certain fundamental truths. Alice and the Black Queen had been running at top speed hand in hand for some time and then sat down under a tree to rest. Alice said: "I believe we are still just where we started from. In my country, when we run we get somewhere else:" The Black Queen said: "In this country, we have to run as fast as ever we can to stay in the same place. If we want to get anywhere else, we have to run twice as fast as that."

That is about the situation in industrial plants in this country; for only strenuous effort, long sustained, will hold a plant in a commanding position.



Type of 500-hp. synchronous motor, which may be started from switchboard on full voltage

Rayon Price War Is On

Failure to Stabilize Would Mean New Cut, Is Trade View

By John Black
Assistant Editor, TEXTILE WORLD

DEVELOPMENTS in the rayon industry in the past ten days have brought out into the open certain trends which hitherto have been recognized only in whispers among executives, and which now may be frankly faced as bringing the industry to a critical period in its development. A price war is on, which may or may not result disastrously for some groups. The outcome will depend largely upon the amount of judgment and coolheadedness shown by the producing companies.

When the producers announced their price cut last week, the move was officially attributed to the low price of raw silk. This explanation was received with skepticism by certain manufacturers and especially by distributors of rayon piece goods. These men found in their own experience that, while the low price of silk certainly brought it closer to rayon, there remained a clear-cut division between the synthetic and animal fibers.

IN THE words of a leading producer: "It certainly is deplorable, in an industry containing so small a number of companies as the rayon industry, that such a situation as now confronts us, should develop. The producers themselves should see where they are headed. If they don't succeed in stabilizing prices, then certainly there will be another cut, and some of us will go to the wall."

Other developments following the price cut have lent added weight to the belief that other elements were involved, and now the trade is convinced that the silk competition was a very minor factor. Actually, it is believed, the price cut was a declaration of war on price-cutting within the trade. For the past three months, price-cutting has been general throughout the industry. Who the chief offenders are, is anyone's guess. The producers at present "pass the buck" of responsibility among themselves. The main point is that the underselling has to some extent invalidated the price list, and it has cost producers who try to hold to lists substantial sums in lost sales.

The present hope of the trade is that this cut will bring about stability by rendering it impossible for producers to sell profitably below list. If the cut does not effect that result, it seems certain that prices will be reduced again, which would eliminate such meager margin as now remains. The only constructive policy for the producers, therefore, would be individually to make every possible effort to hold to list. Claims were made in the trade this week that several rayon companies did not follow the curtailment plan, but instead produced 100% and therefore were able to go out in the market and slash prices, relying on their low overhead to compensate for the reduction. The withdrawal of two leading producing companies from the Rayon and Synthetic Yarn Association is understood to have been prompted by this development. It is also significant, in reviewing the price situation, that certain producers have announced that they would discontinue publication of prices.

From the point of view of the industry as a whole, the situation is most unfortunate. It may mean that the trade has abandoned all efforts at cooperation. The practices of certain groups have rendered impractical and uneconomic the plan of the industry to progress harmoniously. One producer summed up the situation aptly when he said: "It certainly is deplorable, in an industry containing so small a number of companies as ours, that such a situation should develop. The producers themselves should see where they are headed. If they don't succeed in stabilizing prices, then certainly there will be another cut, and some of us will go to the wall."

Statement from Rayon Ass'n

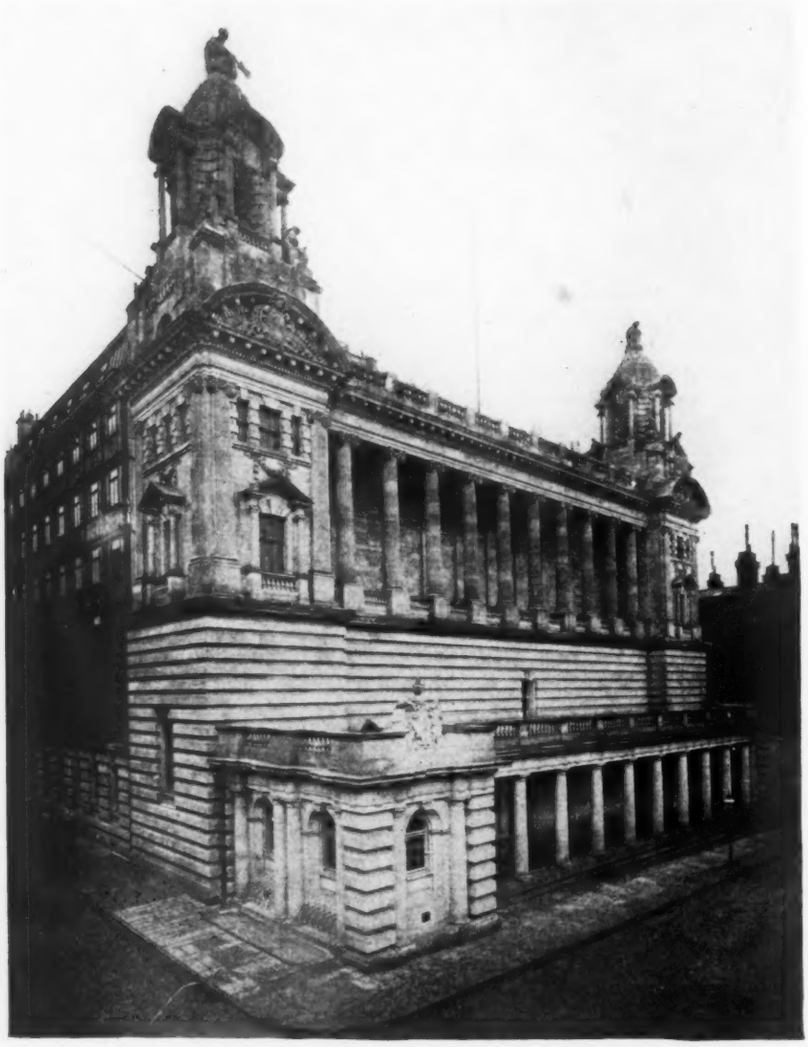
WILLIAM J. MATTHEWS, counsel of the Rayon and Synthetic Yarn Association, on request from TEXTILE WORLD for a statement regarding the resignation of The Viscose Co. and the Dupont Rayon Co. from the association, replied as follows:

"The Viscose Co. and Dupont Rayon Co. resigned solely because they felt the association was unable to render sufficient service to the entire rayon industry, including customers and consumers, concerning all rayon problems, to justify their continuing as members and spending the time and efforts necessarily required. These companies have adequate facilities for research along technical and statistical lines without duplication of effort and expense through the association.

(Continued on page 84)

English Cotton Industry Fights to Regain Supremacy

By William King



Liverpool Cotton Exchange

WHEN an exhaustive and complete history of the conduct of the Lancashire cotton industry during the last ten years comes to be published, it will reveal a lack of foresight and organization on the part of the industry that is almost unbelievable.

It is easy of course to be wise after the event, but it is not difficult to remember the warning notes that were sounded by responsible journals and some few politicians immediately after the World War, when Lancashire plunged into an orgy of recapitalization in the belief that profitable trading conditions being experienced at that time were to last for an indefinite period.

Vast resources of liquid capital vanished into thin air, and into the pockets of promoters, and when the financial locusts from the Midlands and London retired from Lancashire, the once green fields had disappeared and all that was left was a barren waste.

In the year 1919 public opinion in Lancashire was almost unanimous in believing that no other country could produce cotton yarns and cloth of the same quality and price. Vague murmurs were in the air about textile developments in Japan, and several other countries had erected small tariff barriers, but the people were confident that the world could not exist without their cotton goods. They remembered that in the year 1914 they held the major portion of the world's export trade.

War Cut Exports

During the war, England's export trade had been automatically restricted by the curtailment of shipping, by the drain on man power and a thousand other factors that usually operate when a country is engaged in a war that threatens its very existence. The main object became one of survival and to this end everything was

subordinated. In the meantime the demand for Indian turbans did not appreciably decrease; the Chinese did not shorten his shirt; tea, coffee, and sugar planters still persisted in maintaining a regulation number of white duck suits, and as these had to be supplied by someone, and Lancashire was too busy to do it, other countries stepped into the breach.

When war finished, the Lancashire mills, despite restricted production, were in possession of huge financial reserves and trade was booming. A yarn salesman could go on Manchester Royal Exchange and all he had to do was lean against a pillar for ten minutes and dispose of a certain production of yarn or cloth; he could then go home and devote the afternoon to improving his golf. Money came easily, and initiative lay dormant in the hearts of business men, and a few wise observers outside and inside the industry trembled for what the future was to bring.

The mill executives at that time had a reputation for ability and shrewdness which was to a large extent justified, but which recent events have proved was but a provincial ability, and a shrewdness born of dominance in trade markets. They were left with a tremendous number of mills, each one of which had a grossly inflated capital upon which it was difficult to pay a dividend even during the boom period. Japan had been steadily building huge financial reserves, erecting mills, installing modern machinery, improving her technique of cotton manufacture, and had gained a firm footing in the markets of India and other countries during this time. Several small countries had built within their own borders strong and well equipped cotton industries.

Boom Waned in 1920

In 1919 production of textile materials for war had entirely ceased, and the spinning spindles of the world were gradually returning to normal production of legitimate yarns and fabrics. Each country began to sit back and count the cost of four years of slaughter. Foreign exchange rates went wild; international finance was in chaos; trading conditions throughout the world became vague and nebulous, and in 1920 the Lancashire cotton boom tailed off and she felt the pinch of the shoe. From 1920 until 1926 unusually bad trade was experienced, but the general opinion of those connected with the industry was that they were suffering from a depression that usually comes periodically in the cycle of trading, aggravated by reflotation of mills during the boom period.

It was during these years that every effort should have been made to combat the efforts of competitors, but instead of being in vigorous fighting trim, the mills were sadly out of condition. Few of them had tangible liquid assets; almost all of them were weighed down by huge bank overdrafts on which they were paying high rates of interest, and this shortage of liquid capital started a price cutting war in 1922 that is not quite finished today. An attitude of laissez-faire permeated the industry, and this situation continued until 1928, by which time many mills had become derelict and the working men and women shareholders had come to realize that their money was entirely lost.

But these north of England people possess some rare quality that makes them fight in the face of adversity. Savings gone, very little work provided in the mills, they tightened their belts and faced the inevitable. The first definite move toward reconstruction was made when the Lancashire Cotton Corp. was constituted in January, 1929, for the purpose of amalgamating cotton spinning and weaving companies. It is common knowledge that the corporation is desirous of amalgamating 10,000,000 spindles and the corresponding looms, thus providing a well-organized nucleus about which the industry can rally. As the corporation is chiefly concerned with financial reconstruction it follows that this will be done as soon as possible after the mill has been acquired. In the process the shareholders of the average mill will lose from 50% to 70% of the capital initially invested, thus repairing the ravages that took place during the boom period. It is interesting to note that the various banks connected with the industry are giving the corporation full support.

A Step Toward Rationalization

For the first time in history the Bank of England has formed a subsidiary company, the Securities Management Trust, Ltd. This company was formed toward the end of last year in order to forward the rationalization schemes in which the bank is interested. During January of this year, J. H. Thomas, the cabinet minister whose special concern is unemployment, in a statement at Manchester said the city's financial organizations were prepared to give sympathetic consideration to the financial problems involved.

The amalgamation of weaving and spinning mills is the first step toward a rationalization of the industry, that will insure a marshaling of financial, commercial, and technical forces to secure efficiency in manufacture, and economy in production and selling costs; scientific control being applied to the whole of the industry instead of individual units. In practice the corporation aims to organize centralized buying agencies for the purchase of raw material and supplies. A standard count of yarn will be produced at each spinning mill as far as possible, and a weaving plant will produce a standard range of cloth. All production will be sold through special selling agencies, and unnecessary middlemen and yarn agents will be eliminated.

THE amalgamation of weaving and spinning mills is the first step toward a rationalization of the industry that will insure a marshaling of financial, commercial and technical forces to secure efficiency in manufacture and economy in production and selling costs.—*William King.*

Up to the present there does not appear to be a decided attempt to reorganize machine processes. However, the corporation is carrying out experiments at a mill in Walton-le-dale, near Preston, Lancashire, to test the capacity and efficiency of automatic looms. It is reported that five types of looms will be engaged: the Whittaker automatic loom, the Northrop, Vickers-Stafford, and Platt-Toyoda, and a loom with a German automatic filling replenishing attachment.

Machinery Experimentation

During the last year extensive experiments have been carried out in the manufacturing center of Burnley with what is known as the eight-loom system. The original plan provided that ten Burnley manufacturers should allow 4% of their looms to run on the basis of eight looms to each weaver—a variation of the system of multiple loom operation. Each concern was left to experi-

ment as it thought fit, and the results of all experiments were to be pooled for the benefit of the trade, the only stipulation being that the weavers thus employed should receive a fixed wage of $12.14, which after the recent wage reduction amounted to $11.37 for 48 hours work.

The scheme came into operation in April, 1929, and the experimental period ended in March of this year. Both manufacturers and employes agree that the scheme is practicable and economically productive, and the chief point of contention appears to be one of wages. The employers offer a wage of $12.14, while the weavers ask a wage of $13.60. These figures represent in both cases the wages that would be earned under a piece-rate system. Negotiations are now taking place between the Burnley Manufacturers Association and the Weavers' Amalgamation, and this question of wages must be settled before other aspects of the scheme can be discussed.

Manchester, England, Town Hall

Problem of Labor

On the surface the wages controversy would appear to be the only substantial flaw in the scheme, but it is being used to obscure important issues or prevent them from being discussed. The weavers' main objection to the scheme is that it is bound to bring about a tremendous increase in unemployment, and it is they who will have to make the sacrifices, as the eight-loom system does not mean additional outlay to an efficient firm. The obvious answer to this is that the only alternative is a policy of drifting, which will mean further acute hardship.

In order to reduce hardship to the workers, the employers have prepared a scheme to spread employment over those workers who need it most. The plan suggests that married women without dependents should cease work in the mills altogether and that single men and women should work alternate weeks, leaving full time work to male and female labor with dependents. As a tremendous number of married women without dependents are working in the mills, their withdrawal under the eight-loom system would ease the situation.

These two factors, the Lancashire Cotton Corp. and the Burnley eight-loom scheme, are indicative of the constructive attempts that are being made to place the industry on a sound basis. The corporation has already acquired a great number of mills and recapitalized them on a sound basis. One of the largest weaving centers in Lancashire is convinced of the efficiency of the eight-loom system—Lancashire is at last willing to learn from her neighbors—and it is only a matter of time before this system will be adopted throughout the industry, but the changes will take place slowly. Both employers and labor are essentially orthodox in outlook, traditionally conservative in their methods, and in overcoming these deficiencies and getting rid of the superiority complex they will achieve their greatest victory.

There does not appear to be any evidence of intended changes in machine processes. Carding and spinning goes on much in the same manner as it was done years ago. The "stretch-out" system as applied to flyer and spinning frames has received little consideration, mainly owing to the attitude of the trade unions, and the only radical change is the introduction of the multiple system of weaving.

Financial reconstruction, amalgamation of mills, reduction in wages, slight reductions in taxation, and new methods of weaving will undoubtedly place Lancashire in a better position to fight her competitors; and another factor that will help considerably is the recent realization of the industrial leaders that if trade is to improve it can only be done by producing yarns and cloth cheaper than their competitors.

However, in considering the tariff barriers that are erected in India, China, Japan, and many other countries, and the efficiency in productive methods of Lancashire's competitors, one is driven to the conclusion that the mills which are now closed in England will never reopen.

Amalgamation of mills and other beneficial measures will prevent a recurrence of those appalling financial losses that have been customary since 1921, and will also succeed in eliminating unprofitable units, but will not raise Lancashire to the position of dominating the textile markets of the world.

Complete rationalization of an industry can take place only when the supply of raw material is effectively controlled, and production of the finished article regulated in accordance with the absorption capacity of the markets.

This is not possible in the English cotton industry. The supply of raw material cannot be regulated, nor can production be controlled in the case of an industry that depends on its export trade for its general well being. It must draw its raw material from the same sources as its competitors, and the most important item then becomes that of production and distributing cost, and if it is to win export markets this cost must be lower than that of each competitor. In addition there is the comparatively modern development of tariff barriers; each country is becoming its own producer, and naturally desires to protect its own industries, which makes it increasingly difficult for one country to maintain a flourishing export trade.

Ewing Galloway

Where Shall We Locate the Garage?

By Morris A. Hall

TIME and speed have become such factors in textile-mill operation that even in small towns the location of the garage is important. In the city, because of greater distances and heavy traffic, it is of even greater import. With constantly growing costs and the modern importance of transportation, it is not so much a matter of accepting the nearest large-enough building, but rather of deciding in what location the garage will be most economical.

In locating the garage there are the following five major factors to be considered: (1) size of fleet and of individual units; (2) method of operating (as an integral department or otherwise); (3) number and location of plants; (4) size and layout of city or territory covered by fleet; and (5) mental attitude of management toward repairs (partial or complete), maintenance (partial or complete), and similar matters. Besides these major items, there are minor factors needing consideration, such as speed of vehicles in relation to territory, economics of present garage location, total cost and possible savings with new up-to-the-minute equipment and facilities, advantages of distant distributing garages served by big trucks compared with small trucks operated from the main garage, and probable growth of the territory served.

Influence of Size of Fleet

When only one or two trucks are needed to do all the handling, any small cheap structure near the mill is usually considered adequate; a 10x12 corner may be large enough. When a large fleet is required, perhaps 25x50 is not large enough. Space for washing, repairing, work benches, tools, etc., will double the needed floor space. The demand for positive transportation means an extra or spare truck held ready against emergencies, also a spare driver. A foreman is required; a stock man is needed to handle spare parts. The foreman needs an office, space for files and records; the men need lockers. These things can easily run the needed space up to 3,600 sq.ft.

Where it was easy fifteen years ago to find 120 sq.ft., it is difficult now to find 3,600. In an efficiently managed business there is no such unused space. In a city this amount of space would have a very high value wherever located, and the extra demands for space might mean adding on a story. The cost of this might be so great that it would be cheaper to erect a new two-story garage on lower-priced land nearby; arranging storage, washing, heavy repairs on the ground floor, lighter work, officer, etc., on the second.

Trailers are suited to some textile businesses, and, when used, have an influence, bringing up also the possibilities of having truck repair work done outside. Trailers use slightly less space than trucks as a rule; but, if kept on the garage floor attached to their trucks, may take equal or greater space. Having repairs made outside will eliminate the space for workmen, benches, machine and hand tools, stock room, and other equipment. It becomes then a question of balancing the advantages and disadvantages of outside work against inside.

Smaller-Town Situation

The small-town location may mean something entirely different, since an inexpensive structure close to the office or mill may serve. With real estate low in cost and property readily available, the problem is easier to solve. Between the small town and the city lies the larger town or suburban location, where land values may be lower than in the city, yet higher and not as readily available as in the village. In a city the distance to be traveled from garage to mill and back must be balanced against land costs. Two miles, twice a day, 10 trucks, 310 working days, at a cost of 8c. a mile produces a sum equal approximately to the interest at 6% on $17,000. This gives a fair picture of location's importance. With twenty trucks a city or large suburb is presupposed, and a garage location two miles from the mill involves a sum equal to the interest on $34,000. A twenty-car garage requires a structure of 7,500 to 8,000 sq.ft.—three floors 25x100 or four floors 20x100. As the fleet grows, housing needs and costs grow twice as fast.

Influence of Operating Methods

If drivers are independent—hired to drive their own trucks at so much a mile or ton—or if all hauling is jobbed out, the garage problem disappears. This method is seldom used by textile mills, although customary in other industries. When the management takes the attitude that partial repairs and maintenance will serve, the whole problem is changed; there is no need for machine tools, the amount of hand tools and all other equipment is reduced to a minimum as is working space, lockers, and other items. Many concerns so appreciate the advertising value of neatly-painted trucks as to insist on frequent repainting, relettering, twice-a-week washing and polishing, etc. This means a paint shop, even though a small one, a wash rack, space for polishing and similar work, and the paint, varnish, lacquer, soap, chamois, etc., needed to do these different kinds of work.

When the management is contented with any old appearance, so long as the trucks run, the garage problem is not as difficult. No washing equipment is needed; little stock is required beyond oil, grease, and a few simple parts; the necessity for a stockroom and stock clerk is eliminated.

When the business has two or more plants the garage

(Continued on p. 84)

Soaking Silk for Throwing
With Special Reference to
Crepe and Grenadine for Hosiery

By Herbert C. Roberts

INCREASED USE of crepe and grenadine for hosiery has stimulated interest in methods for handling these materials. Mr. Roberts, in this article, outlines the processes used in soaking various types of silk and explains the modifications necessary to produce satisfactory results on hosiery crepe and grenadine.

MAKE-UP of the bath for soaking silk preparatory to throwing is governed by several considerations. Important among these factors is the use for which the silk is intended; that is, whether it is to be employed in making hosiery tram, organzine, grenadine, or crepe. Likewise, the character of the silk and the quality of the materials used are influential. Still another factor is whether the silk is being thrown for consumption in the same plant or is to be used in a different plant.

If a manufacturer is throwing silk for his own use, he will not use any more soaking material than is absolutely necessary. He will be careful also to determine whether there is anything in the soaking material which will injure the goods in soaking or cause damage in some subsequent operation. By this we do not presume to cast any reflection on the integrity of the commission throwster, but rather to point out that he is naturally inclined to use materials which assist him in throwing the silk with the greatest efficiency and economy, and with only a casual thought as to results of his soaking materials in subsequent operations.

It is a question as to whether there is greater economy in using a small quantity of a high-grade soaking material or a larger quantity of a cheaper material. For example, we recently analyzed two soaking materials, each made from approximately the same ingredients. Both were self-emulsifying types of silk-soaking oil. The cheaper oil was milky in its appearance and suggested that it had been greatly diluted with water. This proved to be the case, an analysis showing that it contained 67% water and solvent, 31% fatty matter, and 3% combined alkali. To produce satisfactory results in soaking a certain lot of crepe silk, it was found that 80 lb. of this emulsion was required for 100 lb. of silk; and looking at it from a fat basis, in the 80 lb. of soaking material there was only 24.8% fatty substance.

The other soluble silk-soaking oil was a clear, transparent oil; it contained 14% moisture, 80% fatty matter, and 6% combined alkali. It required 16 lb. of this material to soak 100 lb. of silk. If this latter oil sold for 17c. per lb. and it required 16 lb. to condition the silk, the cost of materials for soaking this silk would be $2.72. If the material which required 80 lb. to give similar results sold for 3.4c per lb., the cost would be the same as for the first oil. In addition, however, the transportation cost of shipping the material with such a large volume of water in it would have to be considered.

Quality of oil is of as great importance to the concern which throws silk on commission as to the manufacturer who throws for his own consumption. The commission throwster is apt to be more generous in the use of his soaking materials, so that when the silk is returned in the thrown condition any waste or losses will be offset. Manufacturers who have their silk tested before and after throwing can tell, however, just how much waste was made. Any throwster who is operating a mill with help that is not as competent as it should be, or whose machinery is not in the best possible running order will, of course, make more waste than the more highly efficiently operated mill. In this case not only would the use of a generous amount of silk-soaking oil have the appearance of compensating for any waste losses, but would probably facilitate the running of the silk so that it would be processed with less waste. This is due to a better lubrication and conditioning of the silk. It is probably true that most commission throwsters use a greater quantity of silk-soaking oil than the throwster who is throwing for his own consumption, because this increased amount of oil aids in the processing of the silk. The increased boil-off due to the increased amount of oil is not a deliberate attempt to cover up this waste, but is an attempt to deliver a better running silk.

If a throwster buys raw silk, throws it, and then sells it to the trade in the thrown form, it is to his best interest to see that the silk is thrown with as much soaking material as possible without causing objections and criticisms from a boil-off standpoint. This is especially true if a throwster is supplying his thrown silk to a number of silk mills, each of which has a different manufacturing condition. Some of these mills may be situated where the natural atmospheric conditions are advantageous for processing or manufacturing silk, while the other may be situated in unfavorable localities. Again, some of the mills in the unfavorable localities may have corrected unfavorable conditions by suitable humidifying system and others may not have installed humidifiers. Therefore the throwster must cater to each of these

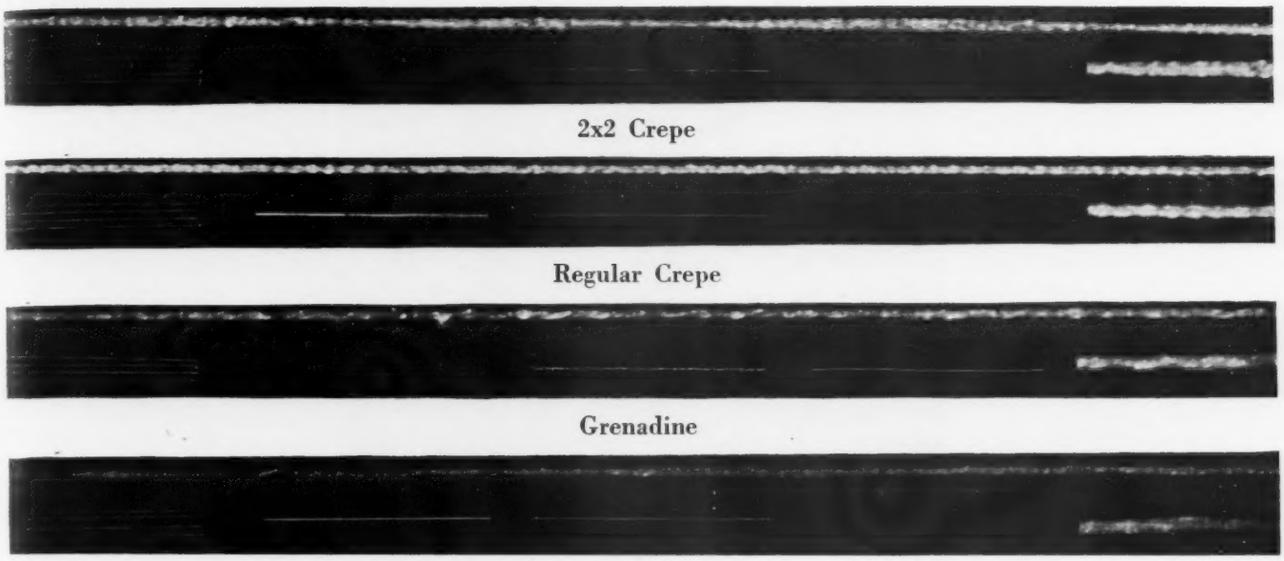


Fig. 1. Silk-soaking bath must be modified for each of these four types of yarn

three conditions. Naturally if the silk works to good advantage in the unfavorable locations, it should run extra well in the more favorable locations.

Quality of Silk Influences Throwster

Qualities of silk which influence the amount and type of soaking materials used, as well as the temperature of the soaking bath, are the nature of the gum on the silk, the degree of hardness of the water used, the acidity of the silk, and the free-acid content of the soaking oil. These factors determine the degree of receptivity which the silk exhibits toward the soaking material.

Before scientific sericulture had developed the present-day breeding and crossbreeding of silk worms, there were, roughly, two classes of Japan silk when classified according to gum nature and the locality where the cocoons were spun. The northern provinces, such as Kansai and Koshiu, produced silks with a hard gum; while the southern provinces, such as Shinshiu, produced the soft-gum silks. Knowledge of the effect of cross-breeding worms from different countries now makes it possible to regulate the nature of the gum more or less regardless of the locality.

Soft silks have the property of taking up more oil from the soaking bath than hard silks when soaked under identical conditions. Thus, when a well-lubricated thread with a relatively high boil-off is wanted and a hard-gum silk is used, the temperature of the soaking bath and the length of time of the soak must be increased over that of the soft-gum silk.

A manufacturer of silk-soaking materials cannot give his customers empirical formulas which are adaptable to all lots of silk which are to be thrown into a certain type of yarn. The soaking materials can remain fundamentally the same; and the only variable factors are amounts, time, and temperature.

Hard water has no place in the composition of a silk-soaking bath. The constituents of water which give it its hardness are the salts of calcium and magnesium. These salts combine with the fatty matter of the soaking oil and form a flaky precipitate which adheres to silk, making it rough. Where the hardness of the water is very slight, such as 1- to 2- grain hardness, this tendency to form an insoluble precipitate can be overcome to a certain degree by using a small amount of borax or other mild alkali. These chemicals when used in limited amounts, such as 8 oz. to a 80 gal. soaking bath, precipitate the hardness-giving constituents so they do not react with the soaking materials.

The higher the acidity of the silk and the higher the acidity of the soaking materials, the greater will be the take-up of the oil by the silk, everything else being equal. However, there is a limit to the free-fatty-acid content that a soaking material should contain.

Soaking Silk for Warps

In the opening paragraph it was stated that the purpose for which the silk was intended, influences the make up of the soaking bath. In general, as the number of turns per in. of the finished thread increases, the amount of soaking oil and the length of the time of the soak should be increased. Warp threads, which are processed without twist, are soaked with 3 to 5% soaking oil for a period of 15 to 45 min. Minimum amounts of oil are used on the soft-gum Japan silks, frequently spoken of as "silks without gum." Longer soaks and more soaking oil are used on the China, Italian, and Japan hard-gum silks.

Frequently, where the warping room and weave shed lack the proper humidity, such water-holding substances as diethylene glycol are added to the soaking bath. These are added in amounts varying from 15 to 20% of the amount of soaking oil used. For example, for a very hard China silk with gum spots, 5% of soaking oil might be used; and if 20% of this amount of diethylene glycol were added, it would amount to about 1½ lb. for 100 lb. of silk.

We next enter that larger silk-yarn field, namely the twisted yarns, which include full-fashioned-hosiery tram, seamless-hosiery tram, organzine, grenadine, weaving crepes and knitting crepes.

Tram and Organzine

For full-fashioned hosiery tram, where the resulting boil-off is 22 to 23%, the usual amount of silk-soaking oil is 8 to 10 %, and the temperature of the soaking bath varies between 75 and 80° F. The silk is soaked anywhere from 5½ hours to overnight. Increasing the length of soaking time from 5½ hours to overnight does not have

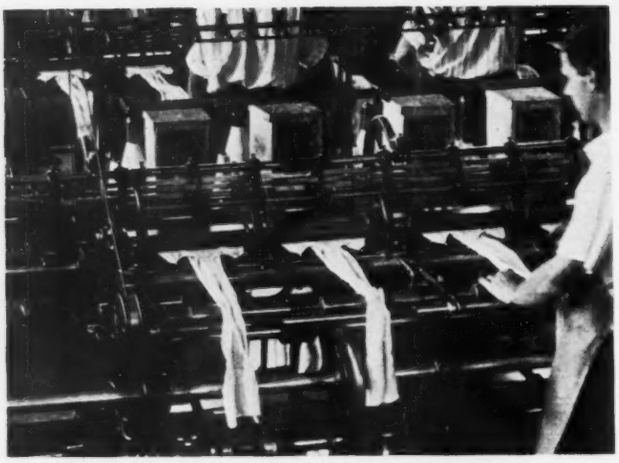


Fig. 2. For use on full-fashioned hosiery machines crepe and grenadine must be made from silk which has been soaked by special methods

any deleterious effect on the silk, although many mills find that the desired properties of the hosiery tram are obtained in 5½ to 6 hours soaking.

Seamless-hosiery tram, which must be harsher, stiffer, and more wiry than full-fashioned-hosiery tram, is soaked with a much smaller amount of soaking oil. The amount runs between 3½ and 5%, the temperature is approximately 75° F. Soaking for 4 to 5 hours seems to produce the best running hosiery tram.

Organzine is soaked with 3 to 4% of oil at a temperature of 70 to 75° F. for a period of 30 to 45 min.

Crepe yarns for weaving are soaked overnight with 15 to 18% of silk-soaking oil at a temperature ranging from 75 to 80° F. Where China and Japan silks with a very hard gum are used, it is often advantageous to add to the soaking bath specially prepared softeners which increase the softness of this silk and give it better running properties. These softeners, which are made from saponified sulfonated oils, seem to soften the gum and produce an oilier film on the silk, thus lubricating the gum to a high degree and preventing the silk from drying out and becoming harsh, hard, and brittle.

Two new types of thrown silk, grenadine and crepe hosiery yarns, are becoming increasingly popular in their use. It may not be strictly true to state that these are new types of silk, but they have not been used for some years. It was thought at first that grenadine and crepe hosiery yarn might prove to be just a passing fad or novelty, but the indications are that grenadine and crepe hosiery yarn will be as popular as full-fashioned hosiery tram has been in the past.

Crepe and Grenadine

Throwsters who undertake to produce grenadine and crepe knitting yarn will find that certain changes will have to be made in the soaking and processing of the silk, as a full-fashioned-hosiery yarn must be softer, more supple, and better lubricated than a crepe weaving yarn. It is necessary, therefore, to add substances to the soaking bath which will produce a softer, more pliable, and flexible grenadine and crepe yarn than has been used for weaving.

Additional softness is sometimes imparted to grenadine and crepe yarn by adding alkalis to the soaking bath. These prove effective as long as the silk remains moist; but if the silk is allowed to thoroughly dry out, these alkalis cause the silk to become harsh and rough and to break readily.

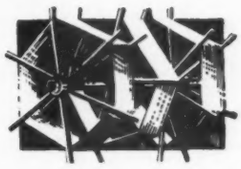
Additional softness in grenadine and crepe yarns is obtained in a number of throwing mills by adding the same type of softener as is used in processing hard-gum Japan and China silks. About one-third as much softener as soaking oil is employed. The usual formula for grenadine and crepe hosiery yarn is 12 to 14 lb. of soaking oil and 3 to 4 lb. of softener for each 100 lb. of silk. Silk for manufacturing grenadine and crepe yarns is soaked at a temperature of 75 to 80° F. for 14 hours or overnight.

When processing grenadine and crepe yarn it is essential that the silk be dried as soon as possible after soaking. If the silk is allowed to remain damp for any great length of time—say a day or so after it has been soaked—it begins to lose its cohesion and the quality of the yarn is impaired.

Another condition presents itself in the manufacturing of grenadine and crepe hosiery yarn. It is not a new problem in some senses of the word; but it is a fairly new problem to throwsters who have formerly thrown weaving yarns and are now beginning to throw hosiery yarns. This is the problem of mildew. Mildew does not occur in the throwing plant, but does occur in the knitting mills where the stockings are fabricated. Mildew occurs in the knitting mills because crepe and grenadine yarns must be more thoroughly wet and kept moist, in order that they may mellow and be in the proper condition for knitting. This mellowing operation is an ideal way to foster the growth of mildew. Many knitters and throwsters who have not taken the precaution to prevent the growth of mildew in the soaking operation, find themselves burdened with considerable damaged silk.

It is possible to prevent the growth of mildew either in soaking or in backwinding. The throwster can apply a mildew preventive in the soaking bath, which will insure adequate protection of the silk throughout the knitting process; or the knitter can add it to his backwinding solution and thus have protection against this source of damage. Any of the common mildew preventives can be used which will not interfere with subsequent operations. For example, formaldehyde should not be used in this connection, because it evaporates and loses its preventive qualities. At the same time, there is a reaction between the gum of the silk and the formaldehyde which hardens the gum and interferes with the boil-off operation. Salts of heavy metals, such as zinc chloride and copper sulphate, should not be used on account of their reaction with the soaking oil. Products such as phenol and cresylic acid are objectionable because of their strong odor and because these materials have a tendency to evaporate. Sodium benzoate, phenol, salicylic acid, and some of the fluoride derivatives make excellent mildew preventives for use in soaking baths for grenadine and crepe yarns and they can also be used in making up the backwinding solution.

U. S. Institute for Textile Research Completes Preliminary Organization



THE United States Institute for Textile Research completed preliminary organization at a meeting of the preliminary board of directors, held at the Chemists' Club, New York City, Tuesday afternoon, electing the following officers and executive committee: acting president, P. J. Wood, Oriental Silk Printing Co., Haledon, N. J.; 1st vice-president, E. N. Hood, treasurer Pequot Mills, Salem, Mass.; 2nd vice-president, Thomas Talbot Clark, treasurer Talbot Mills, No. Billerica, Mass.; treasurer, Dr. E. H. Killheffer, president Newport Chemical Works, Passaic, N. J.; secretary, Charles H. Clark, former editor TEXTILE WORLD, Boston, Mass.; executive committee: acting pres. P. J. Wood, ex-officio, Dr. E. H. Killheffer, E. N. Hood, Thomas T. Clark, E. A. Clements, president Globe Knitting Works, Grand Rapids, Mich.; C. E. Emerson, vice-president Robert & Co., Atlanta, Ga. and W. C. Taylor, secretary-treasurer Southern Textile Association, Charlotte, N. C.

Tentatively Adopt By-Laws

By-laws originally drawn up for Textile Research Council, and offered, together with the incorporation certificate of that organization, to the United States Institute, and revised by a committee consisting of Dr. E. H. Killheffer, P. J. Wood and C. H. Clark, were adopted tentatively by the preliminary directors and will be presented for formal adoption by the membership at the first annual meeting to be held in New York the first Thursday in November. At that meeting, also, the preliminary directors and officers, who are merely acting for the purpose of organizing a program of fundamental technical textile research upon a permanent basis, will resign in favor of successors who will be elected for the full terms prescribed by the by-laws.

Features of By-Laws

The by-laws provide for 24 directors, divided into three classes of eight each, one class being elected for one year, another for two and the third for three years. The executive committee is similarly divided into three classes of two members each, and it is the hope of these preliminary bodies to attract to permanent membership leading men of the industry who will be fully representative of its major branches. The by-laws also provide for six classes of memberships dependent upon the amount of membership fees paid, the important feature of which is that only two classes paying annual dues of $10 and $100 each contribute to current funds, whereas the fees received from the other four classes become a part of the permanent funds, administered by a self-perpetuating board of trustees, it being hoped that the latter funds in time, and supplemented by gifts and bequests, may finance through their income scientific textile research upon an adequate, permanent basis.

To Define Research Program

For the development of a definite program of fundamental research, the following research committee was elected by the executive committee: Dr. W. F. Edwards, director of laboratories of United States Testing Co., Inc., New York; Prof. Louis A. Olney, Lowell (Mass.) Textile Institute; Dr. W. E. Emley, Bureau of Standards, Washington, D. C.; George H. Johnson, research director, Laundryowners' National Association; Prof. George B. Haven, Mass. Institute of Technology, Cambridge, Mass.; E. N. Hood, treasurer Pequot Mills, Salem, Mass.; C. E. Emerson, vice-president Robert & Co., Atlanta, Ga., and Louis A. Hird, treasurer, Saml. Hird & Sons, Inc., Passaic, N. J. This committee is instructed to report back to the executive committee not later than Sept. 15, and its report together with other suggestions will be made available to the directors of the Textile Foundation, which latter body has already received the research institute's request for a hearing in support of the suggestion contained in its resolution, adopted May 23, to the effect that the foundation fund be kept intact and only the income appropriated for research.

Foundation Takes Two Members

Since the May 23rd meeting of preliminary directors of the U. S. Institute for Textile Research, the latter has lost two of its members, Franklin W. Hobbs and Stuart W. Cramer, by appointment of President Hoover to the Textile Foundation directorate, of which Mr. Hobbs in now chairman. Feeling that it would be unethical to retain official connection with a body that may become a petitioner for foundation funds, both have tendered their resignation to U. S. Institute and they have been accepted with regrets. Succeeding Mr. Hobbs on the latter's board is Thomas Talbot Clark, but Mr. Cramer's successor is yet to be appointed.

Publicity Committee

For the purpose of providing the industry with adequate publicity of its doings the United States Institute's executive committee voted to tender an invitation to the trade press to designate a member of the editorial staff of each paper to act as a member of an advisory publicity committee.

Chain Drafts and Reeding for Narrow Fabrics

By Edwin J. Gibbons

THE purpose of the chain draft is to designate the movements, or rise and fall, of the different harnesses. It is taken from the design in conjunction with the drawing-in draft. In other words, it must agree with the drawing-in draft and the relation of that draft to the design. Without a drawing-in draft, either on paper or in the mind's eye, it is impossible to make out a chain draft intelligently.

Chain drafts are laid out on design paper and are usually placed in a vertical position a little to the right of the design. The spaces between the vertical lines represent the harnesses, and the spaces between the horizontal lines represent the picks. When a harness is to be raised on a certain pick, the square in the chain draft which represents the intersection of that harness with the pick is painted in as a raiser in a design. Vermillion (red) water-color paint is usually employed for this work. Where the harness is to be lowered, the square is left blank or unpainted, and resembles a sinker in a design.

Procedure for Making Draft

The procedure in constructing a chain draft is as follows:

First lay out at the right of the design an area with vertical spaces equal to the number of harnesses on which the pattern is to be drawn, and with as many horizontal spaces as there are picks in one repeat of the design. Then, referring to both the drawing-in draft and the design, paint in on the first harness of the chain draft the identical order of interlacing of the end or ends in the design which are drawn on the first harness. Next paint in the second harness in the chain draft according to the order of interlacing of the end or ends in the design that are drawn on the second harness. Treat the other harnesses in the chain draft in like manner until every order of interlacing in the design is represented in the chain draft.

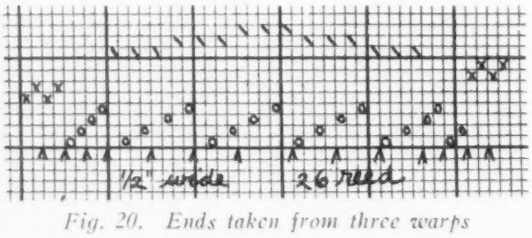


Fig. 20. Ends taken from three warps

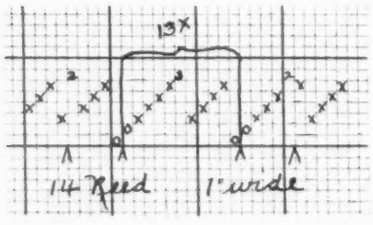


Fig. 21. Use of numerals

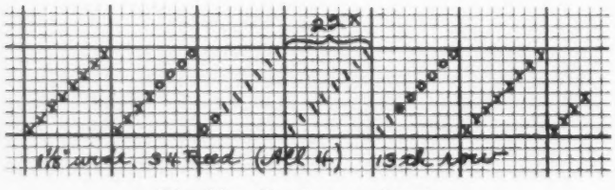


Fig. 22. For jacquard pattern

At *A* in Fig. 23 is shown a design; at *B* is shown the drawing-in draft; at *C* is depicted the chain draft. Fig. 24 illustrates another design together with the harness draft and chain draft.

If the chain draft is to be sent out to the weave room, it is advisable to make it on a separate piece of paper and with ink. Water-color paints will not survive the harsh conditions encountered in a weave shed unless protected by a thin coat of white shellac or silicate of soda (water glass).

In common, or familiar, weaves, where it is unnecessary to paint out the design, the chain draft may be set to the right of the drawing-in draft and in a horizontal position—each harness in the chain draft then being on a line with the corresponding harness in the drawing-in draft. Fig. 25 illustrates a typical instance of this kind.

In some cases it is advisable or necessary to indicate the direction in which the shuttle must travel in making the first pick shown in the chain draft. This may be done by the use of an arrow, as shown in Fig. 25.

Reeding

The purpose of the reeding is to indicate the number of warp ends to be drawn through each dent or split in the reed. In most illustrations it is placed below the drawing-in draft and occupies two horizontal spaces. The different dents alternate between the two spaces, the number of ends to be drawn in each dent being represented by an equal number of raisers, as in a design. In Figs. 23 and 24, *D* illustrates the idea; *D* in Fig. 23 showing a reeding of four ends to the dent, and *D* in Fig. 24 showing a reeding of two ends to the dent.

In actual practice, however, the method most commonly employed consists of indicating below the first harness in the drawing-in draft, the number of ends to be drawn in each dent, placing a caret (inverted "V") at the proper points, as illustrated in Figs. 20 and 21. Fig. 20 shows a reeding of 2-2-2-2-4-4-4-5-4-4-4-2-2-2-2. Fig. 21 shows a reeding of 4-5- (all 11) -5-5, reeding by heddles. In Fig. 22 the reeding is "all 4," as stated.

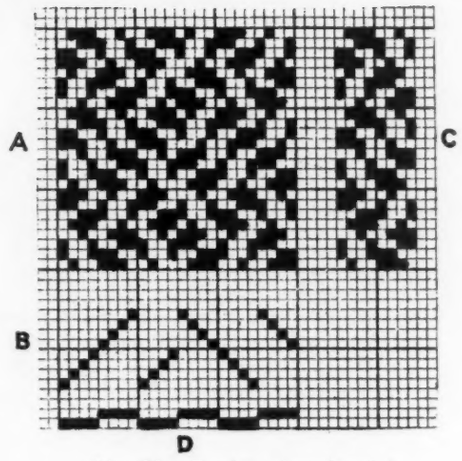


Fig. 23. Design, drawing-in draft, and harness draft

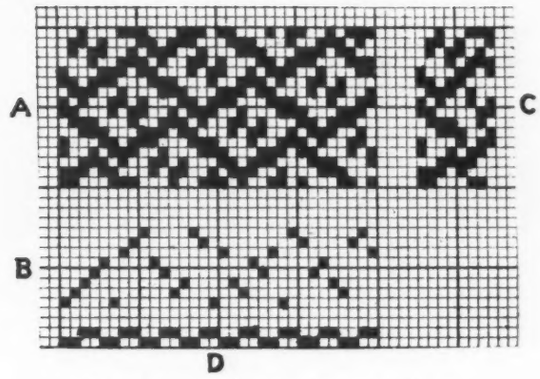


Fig. 24. Another design with drafts

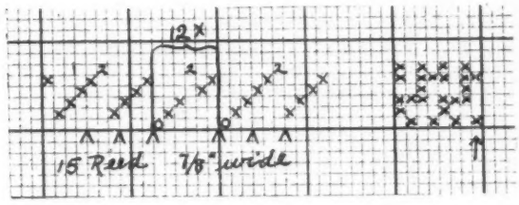


Fig. 25. Chain draft placed at right of drawing-in draft

In drafts where there is a variation in the number of ends per heddle, it is necessary, unless the method shown in Fig. 21 is adopted, to state specifically that the reeding is to be by heddles; i.e., it must be stated that all the ends from a specified number of heddles, instead of a certain number of ends, are to be drawn through a single dent in the reed.

The number or dent of the reed should accompany the reeding, as should also the woven width of the material, and any other special instructions, such as pulled dents (which means the removal of one or more dent wires, thus increasing the size of a particular split—occasioned where a heavy yarn or a cord is to be used in combination with comparatively fine yarn), fan reeds, oval-dent reeds, steel-dent reeds, skipped dents, etc.

Selection of Reed and Reeding

On the selection of the proper reed and the manner of reeding, often depends the quality of the material to be produced. Although a single fabric may be woven by the use of any of a half-dozen different reeds, and an equal or greater number of reedings, there is usually a best reed and reeding.

There is no practical rule by which the dent reed and reeding to be used in the production of any particular narrow fabric may be determined; experience must be the principal guide. There are, however, a few suggestions that may be helpful.

The size or count of the yarn has a considerable bearing on the choice of a reed; the coarser the yarn, the coarser the reed, and vice versa. If the reed is too fine, knots, which are certain to be encountered in even the best grades of yarn, will not weave through. On the other hand, if the reed is too coarse, reed marks are sure to mar the appearance of the fabric. A warp consisting of 8/4 yarn might be drawn in ten ends to the dent in a No. 11 reed, or two ends to the dent in a No. 16 reed, depending upon the texture desired. A warp of 100/2 yarn might be drawn seven or eight ends to the dent in a 46 or a 48 reed, or two ends to the dent in a 62 reed.

Plain Weave

Plain weave should seldom, if ever, be drawn in three ends to the dent. Such a reeding is almost certain to result in well-defined reed marks, especially in a sleazy fabric. The best reeding would, of course, be one end to the dent; but as this would probably require a reed so fine as to be impractical, the choice must lie between two ends to the dent and four ends to the dent.

Where possible it is well to avoid a reeding that will cause the splits to occur regularly at the same point in the repeat of a weave; for instance, five ends to the dent where a five-harness satin weave is employed—though often no ill effects may result.

Contrary to the foregoing, however, if the fabric employs a single binder (one binder end to each rib), it is advisable to cause the split to occur uniformly at one side of the binder end. See Fig. 25. If the fabric employs a double binder (two binder ends to each rib), the split should be made between the binders. See Fig. 21.

Often it is advisable to reed the outer part of a warp thinner (i.e., with less ends per dent) than the central portion. Reeding a warp in this manner helps to overcome the tendency of the filling to pull in at these points, thereby thickening the edges.

The width of the warp in the reed is usually in excess of the width of the woven material, and may be approximated from the width of the woven fabric and the percentage of filling take-up. Fabrics interlaced according to loose weaves (such as the satins, the long twills—four-up-one-down, five-up-two-down, etc.), and thin goods will "come in" more than thick or tightly woven materials. Occasionally in heavy goods, especially those requiring a tight binder, the woven width will be equal to, or in excess of, the width of the warp in the reed.

This article is the seventh of a series on the design and construction of narrow woven fabrics by Edwin J. Gibbons, instructor in textile design at Samuel Slater School, Pawtucket, R. I. Dates and subjects of previous articles were as follows: edges, Nov. 16; edge wires, Dec. 28; tubular weave, Jan. 25; foundation weaves, March 1; varied effects related to the plain weave, April 5 and April 12; drawing-in drafts, June 21. *All rights to the further use of these articles are reserved by the author.*

OVERSEERS' ROUND-TABLE

THIS department offers a new subject for discussion each week and gives readers' comments on problems introduced during previous weeks. The subject which was opened four weeks ago is closed this week and a summary of contributed ideas is given on opposite page

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New Machinery Brings New Problems

Editor, Overseers' Round-Table:

I DON'T think any fair man would think of discharging his old and trusty help simply because there is to be a change in machinery.

If the present help have always given satisfaction on the older machines there is every reason to believe that they will do just as well or better on the new. It would be grossly unfair not to give them a chance to prove their ability.

A. COOPER

The Question of Smoking in a Mill

Editor, Overseers' Round-Table:

IN MY opinion there is no reason why employees should be allowed to smoke in the mill and endanger property by a fire, but I would suggest that every mill provide a smoking room for employees which would be properly fireproof.

If the employees wished to smoke occasionally when their work was caught up they could spend their rest period in the smoking room. Such a room would be of little expense to any company and would add greatly to good will among employees.

Long live the Overseers' Round-Table.

FRANCIS J. MCNEICE
Overseer of Dyeing

Editor, Overseers' Round-Table:

THE DISCUSSION regarding the rule of "No Smoking" is of much interest to the writer, for the reason that he was once given a talk on the subject by our super.

The greater number of men in a plant are habitual smokers. Therefore, if given an opportunity, they are going to light up, but any conscientious person will not voluntarily break a rule the second time after having been made to understand the importance of the rule. If the worker is fair then why shouldn't the firm take Pete's suggestion for a smoking room, or some safe place, where a fellow could get a draw and then get back to his work satisfied?

From my own viewpoint, I would most assuredly be as fair to our organization as they are to me, and I am sure that the other fellows would be the same. J. A. WEBB

Editor, Overseers' Round-Table:

SMOKING SHOULD not be allowed inside the mill, or on the mill grounds, and the rule should be enforced for there is too much at stake. Some workers are too liable to grow careless and serious damages might be the outcome with so much inflammable material around.

The help should be made to realize that they are subject to immediate dismissal for breaking the rule and if a few workers were made examples of, the smoking problem would be erased. I do not, however, believe in the overseer or

Slack Times Bring A

"WHENEVER the cycle of business brings slack times," Superintendent Chase glanced around the circle of overseers, "there arises the problem of the fairest method of dealing with the workers. At the present time a discussion of the best way to spread the work out among the employees is particularly important, and I hope we will gain some valuable ideas. In cases where a mill runs with the full force of workers a fraction of the week, the problem does not arise, except, of course that there it an executive decision necessary whether it is better to run with the full force of workers part time or with a smaller force running full time. At any rate, to clarify the problem we shall consider a mill running full weeks, but with orders calling for only 50% of possible production. How should this half the usual work be divided?"

"I always look upon slack times as an opportunity to clear out some of the driftwood which accumulates as time goes on," Bill presented his views. "When we are running along full and other mills are also we have to employ some workers who are not entirely what we would like. I believe that these workers should be the first to be weeded out when business is slow. In addition, the better class of help, in being kept on, are given a proper reward for their faithful service."

"The difficulty which I see in Bill's system," Pete spoke up, "is that you will never have an organization which is truly effective except in slack times. When things pick up you must again resort to hiring these marginal workers. I think that the development of a plan whereby no one was entirely laid off in slack times would serve as an attraction to the workers, and enable the mill to get and retain an entire organization which would be satisfactory. The chief objection which I have

Additional Problems

to Bill's method is that it does break up an organization and leave room for all sorts of petty politics when it comes time to pick out who will be laid off."

"Following up Pete's suggestion," Jerry joined in, "I think the proper way to handle the situation is to have the employees take a couple of weeks off in rotation. Then the work and the pay envelopes would be evenly distributed. Either that or have them take every other day, or every third day off."

"I don't like to gloom," Bill rejoined, "but I think that instead of helping the organization such a system would prove very disorganizing because of the constant changes."

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How do *you* think the work should be distributed among the employees in slack times?

Overseers and others are invited to discuss this and other questions brought up in the super's talks. Letters accepted and published will be paid for without regard to length. Brevity is desirable.

the super snooping about, as this will cause distrust.

Overseers and super should themselves refrain from smoking and should see that there is no cigar smoking when a group of visitors is taken through the plant, for what is fair for one is fair for the other.

JOHN PICONE
Supt. Heck Silk Co.

Editor, Overseers' Round-Table:

THE PROBLEM of smoking in the mill interests me very much and I would like to see a full discussion of the question. I smoke myself and I know that when indulging in trying work my efficiency is increased by stepping outside the mill for a few puffs of a cigarette.

Summary of Discussion on Mill Baseball Teams

The practice of having a mill represented by baseball, or similar, teams met with support only in such cases where the sport was treated in a casual manner and not taken so seriously that pressure methods were used. It was believed that the desire for a winning team soon led to difficulties in the way of paid players and in the end decreased rather than increased the mill spirit. One contribution advocated the formation of an inter-department league within the mill and the playing of indoor baseball outdoors. The contribution pointed out that this was a game almost anyone could play with considerable enjoyment.

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Everyone knows the fire hazard of carrying matches or smoking in a mill and it would be absurd to even consider smoking there, so it follows that the problem must be solved in some other way. The super who doesn't smoke will say let the smokers quit smoking, but he is not the right man to decide the question. If you will take a man who enjoys smoking and put him in the mill on a ten hour schedule, without smoking, until such time as he produces a workable plan, then you will have as many solutions as you have smoking executives.

I see no reason why a mill could not be equipped with a smoker where a tired worker could go for three minutes recreation. I admit that a few would abuse the privilege, but any overseer or super unable to cope with such a situation should turn his job over to more capable hands.

B. D. GADDY
Golden Belt Mfg. Co.

Problem of Who Should Hire the Help

Editor, Overseers' Round-Table:

I THINK the overseer should hire his own help, for there is a certain understanding which an overseer likes to have with his help which the super or some other might possibly think unnecessary. Then, too, I think the help have more respect for the overseer if he is the one who has hired them.

The overseer knows the job for which he hires a man and knows the type of man he wants for that job; in short, if the overseer is to be held responsible for his job he should be allowed to choose his own help according to his own methods.

K. R. CLEMENT
Dominion Yarns, Ltd.

Editor, Overseers' Round Table:

THE EFFICIENT handling of help is the biggest problem in a cotton mill. Different men have different ways of meeting the same problem and, as long as they are a success, we cannot condemn their methods. It is up to the judgment of the management just how this should be handled.

The writer thinks that, regardless of the size of the mill, the overseer should hire and discharge all help. The superintendent should O.K. every voucher for the payment of a discharged employee, and investigate the cause of leaving. We all know that excessive labor turnover is detrimental, and, if the overseer spends all his time in discharging and hiring help, the trouble should be located at once and eliminated.

JAMES L. TURNER
Dominion Fabrics, Ltd.

NEWS about MEN

J. A. MITCHELL, of Anderson, S. C., president of the South Carolina commercial secretaries association, urges that a "cotton products week" be observed throughout this State during August. He believes such a movement would stimulate business and emphasize the importance of home folks using cotton products.

JOHN SANFORD, head of the Bigelow-Sanford Carpet Co., Amsterdam, N. Y., and family, are now occupying their summer home at Saratoga Springs.

F. B. GORDON, president of the Columbus (Ga.) Mfg. Co., has resigned as president of the Country Club of Columbus.

HENRY P. KENDALL, president, The Kendall Co., Boston, Mass., is author of an article entitled "What Is Common Sense in Management?" which appears in the August issue of *System*, one of the McGraw-Mill publications. Mr. Kendall is president of The Taylor Society.

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J. J. MURPHY, president of the United Waste Mfg. Co., Cohoes, N. Y., is passing the month of August at Saratoga Springs.

W. C. GEER, president of the Faith Knitting Co., Averill Park, N. Y., has been elected a director of the Troy Orphan Asylum Association for the ensuing year.

GEORGE H. LANIER, president of the West Point (Ga.) Mfg. Co., made the principal address and delivered the diplomas to the pupils of the vocational night school, which was concluded a few nights ago. Other talks were made by JOHN B. JONES, superintendent of the Shawmut Mill; W. T. HARRISON, superintendent of the schools, and WILLIAM WHORTON, instructor in textiles.

HENRY T. WHITIN, president of the Paul Whitin Mfg. Co., Northbridge, Mass., and MRS. WHITIN, are passing the summer at the Oceanside, Magnolia, Mass.

J. H. SHINE, president of the Hope Knitting Co., Cohoes, N. Y., is a member of principal committees named by the Rotary Club in that city to carry on organization work.

DWIGHT W. ELLIS, president and treasurer of A. D. Ellis Mills, Inc., Monson, Mass., and family, are passing the summer at Weekapaug, R. I.

MOSES EWING, head of Ewing Thomas Corp., Chester, Pa., left this week for a vacation trip to the far West. He plans to be away from his office for several weeks.

CHARLES L. AMOS, prominent hosiery manufacturer and aviation enthusiast of High Point, N. C., made his first solo flight last week, after a training under the supervision of Paul F. Davis, operations manager of the High Point airport. Mr. Amos has applied for a private pilot's license.

William D. Anderson, president of the Bibb Mfg. Co., Macon, Ga., who recently addressed the Rotary Club of Atlanta, Ga., on working hours in the textile industry.

FERDINAND THUN, the former president of the Berkshire Knitting Mills, and MRS. THUN have sailed for Europe, to spend the balance of the summer touring abroad. Part of the time will be spent in Bremen, Germany, Mr. Thun's birthplace.

H. O. DAVIDSON has resigned as vice-president of the Eagle & Phenix Mills, of Columbus, Ga.

W. H. MORROW has been elected secretary of the Efird Mfg. Co., Albemarle, N. C., succeeding W. G. EFIRD who still retains the office of vice-president.

W. M. MCLAURINE secretary, American Cotton Manufacturers' Association, Charlotte, N. C., delivered a radio fashion talk through station WBT, of Charlotte, July 21. The subject of his talk was "What Fashion Demands of You."

RICHARD C. WHITIN, secretary of the Paul Whitin Mfg. Co., Northbridge, Mass., and family, are summering at Sakonnet, R. I.

DANA OSGOOD, former secretary of the Draper Corp., Hopedale, Mass., and family, accompanied by EBEN DRAPER, son of B. H. BRISTOW DRAPER, president of the corporation, sailed from New York on July 26 for a six weeks' trip to Europe, planning to visit England, France and Switzerland.

D. A. BURNAP, former secretary of the Chalmers Knitting Co., Amsterdam, N. Y., is now located in Los Angeles, Cal., where he has embarked in business.

BERNARD GOLDING, treasurer of the Southbridge (Mass.) Finishing Co., and the Sturbridge (Mass.) Finishing Co., and MRS. GOLDING, have returned from a two months' honeymoon in Bermuda and will pass the remainder of the summer in Fiskdale, Mass.

WINFIELD ALDRICH SCHUSTER, son of WALTER E. SCHUSTER, treasurer of the Schuster Woolen Co., and the Hayward Woolen Co., both of East Douglas, Mass., and ELEANOR FREEMAN, Worcester, Mass., were married in Harmony. Me., on July 26.

C. H. PORTER, who has been in charge of the Globe Yarn Mills, Inc., and the Catawba Spinning Co., Mount Holly, N. C., has been chosen secretary and treasurer of the Lola Mfg. Co., Stanley, N. C., and will enter upon his new duties Aug. 1. He succeeds R. F. CRAIG, who has resigned to devote more time to the Gaston County Dyeing Machinery Co., of which Mr. Craig and W. P. HORNBUCKLE are owners.

ROBERT S. MEBANE, prominent in the textile industry in the Carolinas, has been appointed a member of the Northwestern North Carolina Recreational and Development council.

FREDERICK C. DUMAINE, treasurer of the Amoskeag Mfg. Co., Manchester, N. H., is leaving shortly for a business and pleasure trip to Europe. During his absence FREDERICK C. DUMAINE, JR., and HENRY E. RAUCH, acting agent, will be in charge of the mills.

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FRED A. RAKESTRAW, Hyde-Rakestraw Co., Philadelphia, and MRS. RAKESTRAW have left for a three weeks' tour through New England. They will motor most of this time with friends.

C. M. ROBINSON, who retires as agent for the Wauregan (Conn.) Co., on Aug. 1, will be succeeded by J. F. GARDNER, JR., agent for the Quinebaug Co., Danielson, Conn., for the last 16 years and who will continue in that capacity.

E. C. KLINDWORTH, managing director of the Sydney, Australia, plant of Jantzen Knitting Co., Ltd., subsidiary of Jantzen Knitting Mills, Portland, Ore., has just returned to his home city for a visit of two months and reports business showing a gratifying increase.

DR. J. E. NICHOLS, of the British Research Association for the Woolen and Worsted Industries, who has been in Canada for the last two months investigating the wool growing industry, has completed his study and will return home in the near future.

WALTER I. STIMPSON, agent for the Draper Corp., Hopedale, Mass., and MRS. STIMPSON, have returned from a vacation passed at Mirror Lake, N. H.

MILTON ENSOR, general manager of Wilbur Cotton Mills, Inc., and southern representative of the Van Gelder Yarn Co., Inc., in company with MRS. ENSOR, is spending a few weeks in the North, on business and pleasure. Greater part of the time will be spent at Atlantic City.

J. O. BLACKMON will be general manager of the Tellico Cotton Mills, at Tellico Plains, Tenn., which, after several years' closing, will be opened shortly by the Callaway Mills, Inc.

LEWIS FOWLER, general manager of the Palatine Dyeing Co., St. Johnsville, N. Y., has returned from an extended sojourn at Lake Pleasant, N. Y.

CHARLES T. HART is acting temporarily as traffic manager for the M. J. Whittall Associates, Ltd., Worcester, Mass., succeeding the late FRANK A. CHAMPAGNE.

HERBERT F. RYAN, service manager for the Hamilton Woolen Co., Inc., Southbridge, Mass., and family, are passing the summer at Pleasant View, R. I.

MISS CATHERINE HOWE, North Brookfield, Mass., has accepted a position as technician with Cheney Bros., South Manchester, Conn.

W. O. RHODES, service supervisor for the Du Pont Rayon Co., Old Hickory, Tenn., delivered an address on "Developing an Industrial Program," at the meeting of the Southern Conference on Human Relations in Industry in Asheville, N. C.

MRS. JULIAN DEW, social and educational director of the Carolina Textile Corp., has been chosen an officer of the Southern Textile Social Service Association. She was an honor guest at the Dillon (S. C.) Rotary Club and delivered an excellent address on the work of human relations in Industrial and Textile Service Association, which conference she has just attended at Blue Ridge, N. C.

JAMES L. TRUSLOW, associated with the Whitin Machine Works, Whitinsville, Mass., and MRS. TRUSLOW, who were married in Sanbornville, N. H., on July 30, will pass the next two months abroad.

W. E. TARRANT, of Piedmont, S. C., a graduate and a former professor in the textile department of Clemson College, has accepted the position as head of the weaving and designing department of the Auburn (Ala.) Polytechnic Institute.

L. E. ANDERSON, who has been in the textile mill business for more than 24 years, has tendered his resignation, effective Aug. 1, as superintendent of Mill No. 3 of the Highland Park Mfg. Co., of Charlotte, N. C. Before coming to Charlotte, Mr. Anderson was connected with mills in Henrietta, N. C., and Birmingham, Ala. In addition to his mill activities in Charlotte, he is at present one of the city councilmen.

EDWIN F. BARNES, superintendent of the Central Works of the American Steel & Wire Co., Worcester, Mass., has been transferred to the North Works of the same company in Worcester for special work.

A. STANLEY LLEWELLYN, superintendent of the Wateree Mills, of the Kendall Co., Camden, S. C., and an active local and district American Legion leader, was unanimously elected state commander of the South Carolina department of the American Legion at the annual convention held in Columbia.

J. W. CORLEY, superintendent of the Sunset Textile Mills, Selma, Ala., who recently underwent a very serious operation at the King Memorial Hospital, is gradually improving.

BERT MCINTIRE has been promoted to the superintendency of the Fitzgerald (Ga.) Cotton Mills.

J. ARMAND STRAIT, superintendent of weaving for the Howard-Arthur Mills, Inc., Fall River, Mass., has returned to his former position as overseer of weaving at the No. 2 mill of the Grosvenor-Dale Co., North Grosvenor Dale, Conn., succeeding HERBERT DILLABER, who resigned after 37 years of service with the company.

R. H. BURT, formerly overseer at the Social Circle (Ga.) Cotton Mills Co., has been appointed overseer of weaving at the Peerless Mills, Thomaston, Ga.

H. D. BROOME is now night overseer of the weaving department of the Marion (N. C.) Mfg. Co.

B. D. COX, overseer of the weaving department of the Lydia Mills, Clinton, S. C., has gone to Johnson City, Tenn., and L. D. COOLEY will be in charge of his department during his absence.

G. C. COMBER is now head of the carding department of the Griffin (Ga.) Mills.

H. A. DABNEY has resigned as overseer of the spinning department of the Rock Hill (S. C.) plant of the Aragon-Baldwin Cotton Mills, Inc.

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CHESTER A. CROSSMAN, head electrician for the Lancaster Mills, Clinton, Mass., for about 25 years, has concluded his services owing to the closing of the plant.

J. HOWARD FERGUSON, for the last eight years in charge of the color shop of the Slater Co., Inc., Webster, Mass., has resigned to accept a similar position in New Jersey.

A. R. LINTON, formerly dyer for the Canadian Consolidated Felts, Ltd., Kitchener (Ont.) Canada has resigned his position to accept the position of dyer with Dominion Woolens & Worsteds, Ltd., at its Bonner-Worth mill, Peterboro, Ont.

JOHN A. FERNLEY, of Leader Weaving Co., Central Falls, R. I., at a recent meeting of the voters of that place, was elected a member of Board of Fire Wardens and Tax Commissioners and has been elected clerk of these bodies.

H. A. DABNEY has resigned as overseer of spinning at the Aragon (Rock Hill, S. C.) plant of the Aragon-Baldwin Cotton Mills chain after being with this chain ten years. His future plans have not been announced.

HOMER GRAY has been promoted to second-hand of weaving at Swift Spinning Mills, Columbus, Ga.

F. J. HORN has accepted a position in charge of weaving and designing at the plant of Franklin (Mass.) Weaving Co.

M. V. MILLER, head of the spinning department of the Buck Creek Cotton Mills, Siluria, Ala., has resigned.

W. O. RUFFIN, formerly of Warrenville, S. C., is now head of the weaving department of the Buck Creek Cotton Mills, Siluria, Ala.

HOWARD L. SMITH of the Draper Corp., warehouse, Spartanburg, S. C., is on a visit at the main plant in Hopedale, Mass.

JAMES TRICKEY, West Warren, Mass., has accepted a position as loomfixer in a mill in Cambridge, Mass.

JOE WILSON has been made head of the spinning department of the Chesnee (S. C.) Mills.

WALTER M. BRICE, JR., in charge of the warehouse of the Draper Corp., at Spartanburg, S. C., is on a visit to the home office at Hopedale, Mass.

Obituary

James G. Clark

James Guyan Clark, president of James G. Clark, Inc., died suddenly July 23 at his home in Dongan Hills, Staten Island, N. Y. He had been at his office as usual on that day, although he had been in poor health since the early part of the year. Mr. Clark was born on Staten Island about 54 years ago, the son of the late Dr. Frederick E. Clark. He was a member of the original Troop A, later Squadron A, of the New York National Guard, and saw service in Porto Rico as a sergeant during the Spanish-American War. One of his first business connections was with the old Clarence Whitman & Co., where he worked for nine years in the converting department. He was later with the U. S. Finishing Co. for 22 years, and served as vice-president of the corporation from 1917 to June 28, 1923. About that time he went in business for himself as a commission finisher, which business was succeeded on Jan. 1, 1924, by the Clark, Rice Corp., of which he was secretary and treasurer. On Jan. 1, 1927, the firm of James G. Clark, Inc., was formed. This firm, of which he was head, is agent for the Delta Finishing Co.; Martin Dyeing & Finishing Co.; Summerdale Dyeing & Finishing Works, Inc., and Union Bleachery. Mr. Clark was a member of the Merchants' Club and of the Richmond County Country Club, Dongan Hills, of which he was a member of the board of governors, and also served as secretary for a number of years.

He is survived by his widow and three children.

Frederick Alston Springer

Frederick Alston Springer, treasurer and manager for 23 years of the former Mianus Woolen Co., Cos Cob, Conn., which was taken over by the Dent Woolen Co., died at his home in Greenwich, Conn., on July 24. He was born in Marlboro, Mass., on June 14, 1868, and after graduating from the Masaachusetts Institute of Technology, became manager of the Sanford (Me.) Mills. Later he designed and built the Mianus (Conn.) Mfg. Co., and for 23 years was manager and treasurer of that company and its successor the Mianus Woolen Co. He was a director of the Greenwich Trust Co. A widow, a daughter and a son survive.

NEWS about MILLS

Cotton

Powdrell & Alexander, curtain manufacturers, Danielson, Conn., have declared a regular quarterly dividend of $1.75 per share on preferred stock, payable Oct. 1 to stock of record Sept. 15. The regular quarterly dividend of 87½c. on common shares is payable Aug. 15 to stock of record Aug. 1.

Grosvenor-Dale Co., No. Grosvenor Dale, Conn., has resumed a full-time operating schedule in both mills.

Muscogee Mfg. Co., Columbus, Ga., manufacturing towels, ticking and specialities, has purchased and installed one five-roll straight and friction calender from the Butterworth Co., of Philadelphia.

Columbus (Ga.) Mfg. Co., resumed operation July 28, after closing down for one week to give the employes a vacation and at the same time repair the machinery and plant. This plant is operating 60% of the machinery on a full-time schedule.

Mary Leila Cotton Mill, Greensboro, Ga., is now running 55 hours each shift, night and day.

Manchester (Ga.) Cotton Mills recently purchased from the Barber-Colman Co., of Rockford, Ill., four automatic spoolers and two high-speed warpers which have been installed. The plant has eliminated night work entirely and is now running 55 hours per week day operations.

Barker Mill, Auburn, Me., (Little Androscoggin Water Power Co.) stockholders have authorized the officers to liquidate the mill. The plant had 550 looms and employed a maximum of 200, manufacturing gray goods. All officers and directors were re-elected at a recent meeting of the stockholders.

Bates Mfg. Co., Lewiston, Me., is running on a curtailed basis, following strike of a group of jacquard weavers.

Blackstone (Mass.) Mill of the Lonsdale (R. I.) Co., will shut down from Aug. 4 to Aug. 11 and also from Aug. 18 to Aug. 25. The plant has been on a curtailed schedule for some time.

Union Cotton Mfg. Co., Fall River, Mass., stockholders have voted approval of recommendations of directors that the corporation be dissolved and the business liquidated. The mills have been idle for several months.

International Lace Co., Gouverneur, N. Y., is considering resumption of operations following several months' curtailment.

Erwin Cotton Mills, West Durham, N. C., are running on a full-time production basis, with close to normal working force, and expect to hold to this schedule for an indefinite period.

Wiscassett Mills Co., Albemarle, N. C., at the annual meeting of stockholders, declared a 5% semi-annual dividend, and re-elected its old officers and board of directors.

Falls Mfg. Co. and **Southern Mfg. Co.,** (Granite Falls, N. C.) stockholders have voted to consolidate. Directors of the mills are largely the same.

Myrtle Mills Inc., Gastonia, N. C., have had their old oil spraying equipment replaced with Borne Scrymser Co. 1930 Model.

Lenoir (N. C.) Cotton Mill is having a new system of humidifiers installed by the Bahnson Co., Winston-Salem, N. C.

Warlick Mfg. Co., Newton, N. C., is installing 48 additional Draper looms in the recently completed addition. The company has heretofore been operating 122 looms on dress goods, it is said.

Edna Cotton Mills, Reidsville, N. C., have posted notices to the effect that their plant has indefinitely suspended operations until improvement in the textile business is shown.

Inverness Mills Co., Winston-Salem, N. C., is operating on a day and night schedule.

Woonsocket (R. I.) Falls Mill, has awarded a general contract to the Aberthaw Co., Boston, Mass., for alterations and improvements in its mill at 157 Clinton St.

***Spartanburg, S. C.** Carded yarn mills in this section, following a survey, are planning to continue the 40% curtailment program adopted by them generally several months ago. This will be the order of things until business conditions materially improve.

Neely-Travora Mills, Inc., York, S. C., will shut down both plants for three weeks, due to lack of demand for their products. They have heretofore been operating on a curtailed schedule.

Tucapau Mills, of Spartanburg, S. C., are installing 50 new Draper looms for the manufacture of 48-in. and 50-in. cloth.

Borden Mills, Inc., Kingsport, Tenn., which have been closed down for two weeks, opened July 28, with a full-time day and night schedule, operating the full force of employes, numbering 1,200.

Martinsville (Va.) Cotton Mill Co., Inc., which is under control of Chadwick-Hoskins Co., of Charlotte, N. C., has closed down for three months, or possibly longer.

Farr Alpaca Co., Holyoke, Mass., stockholders voted at a special meeting against the retirement of 4,000 shares of stock now held in the treasury. For the year ending May 31 the company reports a net income of $5.71 on each of 144,000 shares compared with $4.71 a share for the previous year.

*Indicates previous mention of project.

Wool

Maine Woolen Mills, Inc., Camden, Me., are running on a reduced production schedule with curtailed working force, and will continue on that basis for some time.

Knox Woolen Co., Camden, Me., is running at about 50% of capacity and expects to hold to that schedule for a number of weeks to come.

Bigelow-Sanford Carpet Co., Clinton, Mass., is reorganizing its administrative forces as a result of recommendations of efficiency engineers from the New York office to conform with methods used in other plants of the company at Thompsonville, Conn., and Amsterdam, N. Y.

Walworth Bros., Inc., Lawrence, Mass. All equipment and textile machinery, including looms, winders, spoolers, slashers, washers, sewing machines, etc., will be sold by Samuel T. Freeman & Co., of Boston, on Aug. 6. Operations at the plant were suspended last year.

American Woolen Co., Lowell, Mass., has closed down the carding department at its local Beaver Brook mill for an indefinite period. The plant has been running on a five-day week basis for some months past.

Talbot Mills, North Billerica, Mass., have awarded contract to the H. Wales Lines Co., Meriden, Conn., for the proposed $100,000 finishing building to be erected from plans by Charles T. Main, Inc., 201 Devonshire St., Boston.

Thorndike Co., West Warren, Mass., resumed operations on July 28, following a two weeks' shutdown.

Cocheco Woolen Mfg. Co., East Rochester, N. H., has decided to change its announced plans for a week's shutdown for employes' vacations, and the plant will continue on regular production schedule until further notice. The company is said to have booked sufficient business to insure operations for some weeks to come.

George W. Davis, Inc., Manayunk, Philadelphia, Pa., is planning the rebuilding of portion of mill on the Manayunk Canal, near Main St., recently damaged by fire with loss reported in excess of $40,000.

Cambridge Worsted Mills, Philadelphia, Pa., manufacturers of worsted goods, have been reorganized and the name has been changed to **Cambridge Mills, Inc.,** the business having been incorporated and new officers will be chosen. It is reported that James Hulton of the Hulton Dyeing Co., has become interested in it. Clarence Manuel is in active charge at the plant.

***French Worsted Co.,** Woonsocket, R. I., has awarded a general contract to the Bouvier Brien Construction Co., Woonsocket, for an addition to its mill on Hamlet Ave., to cost about $16,000. Walter Fontaine, Woonsocket, is architect.

Fields Mfg. Co., Mouth of Wilson, Va., is said to be planning for early resumption of production at its mill, closed down about two months ago through lack of water power. A large dam has been built to insure water power service at the plant in the future.

Knit

Alabama Hosiery Mills, Decatur, Ala., recently placed an order for 24 additional full-fashioned hosiery machines, which will be installed at the rate of two a month. With the new machines in operation, the plant will increase the number of operatives to approximately 300, according to A. G. Patterson, president.

William Carter Co., Barnesville, Ga., after having been closed down for some time has resumed operations.

Union Mills, Inc., Hudson, N. Y., cotton and wool fleeced lined underwear, are now operating near capacity with a normal working force.

Atlas Knitting Co., Amsterdam, N. Y., has received inquiries from a number of prospective purchasers regarding the disposal of its plant, which is now on the market.

Roff Knitting Mills, Inc., Cohoes, N. Y., will resume full-time schedules Aug. 4, after the annual weekly vacation period.

Berger Hosiery Mills, Philadelphia, Pa. The building which this new full-fashioned hosiery manufacturing concern will erect at Lycoming & H Sts., will be a two-story structure equipped with 20 full-fashioned machines, 45 gauge. The plant will be 55x150 ft., brick construction. Ground will be broken Aug. 1 and it is expected that machinery will be installed by November. Product will be sold through Berger Emerald Toe Hosiery Shops, a chain in this city. David Berger, head of the chain of retail stores, Harry Bachove, and George F. Lang, of the CoEd Hosiery Mills, Philadelphia, which has supplied the Berger retail shops for years, are interested in the new mill.

Perfection Hosiery Mills, Inc., plant, Burlington, N. C., which was burned several months ago, has been rebuilt and as soon as insurance matters have been adjusted, it is said, new equipment for the plant will be purchased.

Apex Hosiery Co., Philadelphia, Pa., manufacturer of full-fashioned hosiery, closed its plant as usual the last week in July to give employes their annual vacation. More than $200,000 was distributed to workers from the vacation fund. The mill is closed this week each year regardless of business conditions, an executive stated. Machinery will be started the first full week in August although the company plans to curtail production so as to avoid accumulation of large stocks.

Harron Hosiery Co., Philadelphia, Pa. It is reported this firm, manufacturer of full-fashioned hosiery, will make application for a patent covering crepe hosiery now being manufactured, claiming that if grenadine of certain twist was patentable for hosiery it is probable that the same will apply to crepe made according to certain standards.

***J. W. Landenberger & Co.,** Philadelphia, Pa., manufacturers of infants' and children's fancy hosiery, have awarded contract to Sutton & Stephenson, for the new plant which will be located at Castor & Kensington Avenues. The building was designed by Julian S. Simshon and will represent an investment of $175,000. It is planned to have the Landenberger mills consolidated under the new roof by Nov. 1.

Berkshire Knitting Mills, Reading, Pa., starting July 28, closed several departments for a week. For some weeks the plant has been operating part time.

Lillian Knitting Mills, Albemarle, N. C., have declared and paid a 5% semi-annual dividend and re-elected all old officers. H. L. Horton was elected to the board of directors to fill the vacancy occasioned by the recent death of A. C. Heath.

Golden Belt Mfg. Co., Durham, N. C., has just completed installation of ten additional full-fashioned hosiery machines. The mill still has room in its new building for a considerable number of additional machines, but it is understood that no more will be installed for some time. The plant is being operated at present on a schedule of four days and four nights a week.

Everwear Hosiery Co., Chattanooga, Tenn., has applied for charter of incorporation, with Eugene Merriam, M. R. Cranford and Burnet Sizer, as incorporators. The capital stock is $5,000.

Chilhowee Mills, Inc., Athens, Tenn., have expended $30,000 for new equipment, which includes modern attachments for the knitting machines, which greatly increases the production and gives the latest patterns in hosiery.

Infant Socks, Inc., Fond du Lac, Wis., recently closed their plant for a period of three weeks, while samples for next year are put out. The mill employs about 100 when in full operation.

Grovenor Knitting Co., Ltd., with headquarters at Montreal (Que.) Can., has been organized and a Dominion charter obtained. The company, which is capitalized at $750,000, is authorized to carry on business as manufacturers of cotton, silk, hosiery and kindred lines. Montreal lawyers are mentioned as the incorporators.

Silk

M. Salzberg & Sons, Putnam, Conn., have added 21 new looms to their equipment, making 154 now in operation. The plant is operating day and night and it is expected that at least 200 looms will be in operation by the end of the year.

Schwarzenbach-Huber Co.'s (Norwich, Conn.) plant has been acquired by the Carpenter Mfg. Co., Norwich, and will be occupied for another branch of manufacture.

George Keller, Paterson, N. J. M. M. Baker, Paterson, has been appointed receiver for this silk mill.

McBride Bros., Inc., Fullerton, Pa., have been chartered with a capital of $5,000, to take over and operate **McBride Bros.,** with local mill. The new company is headed by John and William J. McBride, Allentown, Pa.; and Harold A. Butz, Allentown.

***Rose Mills, Inc.,** Philadelphia, Pa. As has been announced in these columns, this concern is moving to new location, having purchased plant at Indiana Ave. & C St. They have made settlement for this plant which contains 88,000 sq.ft., a five-story structure formerly occupied by the Endurance Mills.

Stutz-Hadfield Silk Corp., Clinton, S. C., hereafter will operate on a three-day-a-week schedule, running Mondays, Tuesdays and Wednesdays. Unsettled business conditions and the present low price of raw silk impelled the management to adopt this curtailment of schedule.

Rayon

DuPont Rayon Co., Buffalo, N. Y., is running on a basis of about 45% of capacity, and expects to continue on that schedule for some weeks to come. The plant at Waynesboro, Va., is increasing the number of its employes. About 20 girls and several men have been called back to work within the last few days.

Industrial Rayon Corp., Covington, Va. The 18 homes being erected for the executives and key men at the plant will be ready for occupancy very soon.

Tubize Artificial Silk Co. of America, Inc., Hopewell, Va., is running at about 50% of capacity at local mill, and will continue on that schedule for an indefinite period.

Canadian Celanese, Ltd., Drummondville, (P. Q.,) Can., has placed an order with the Bahnson Co., Winston-Salem, N. C., for additional humidifiers.

Finishing

Lewiston (Me.) Bleachery & Dye Works are on a five-day-week basis during July and August.

Pilgrim Piece Dye Works, Inc., Paterson, N. J., are moving to a new and larger plant in Brooklyn, at No. 1 Nassau Ave. The company will continue to specialize in the dyeing and finishing of rayons. New machinery is being installed throughout the plant, which will be three times the size of the Paterson mill.

North Carolina Finishing Co., Salisbury, N. C., recently made extensive repairs on the main building and built additional warehouse facilities. J. E. Sirrine & Co., Greenville, S. C., were the architects and engineers in charge.

Miscellaneous

Harrysaul Bedding Co., Inc., Brockton, Mass., recently organized with a capital of $25,000, to operate a local mill, will be represented by Haskell Rudnick, 25 Hosmer St., Dorchester, Mass., treasurer of the company. Max Rudnick is president.

Oregon Linen Mills, Inc., Salem, Ore., closed July 19, because of a temporary lull in the market. About 35 are employed at this plant.

*Indicates previous mention of project.

Questions and Answers

We undertake to answer, free of charge, to the best of our ability, questions pertaining to textile matters received from any regular subscriber to TEXTILE WORLD. We do not undertake, however, routine analysis of yarn or fabric, or investigation involving unusual expense.

Inquiries should give the fullest information and data possible. In the case of damage to material, a sample should be sent. All inquiries must be accompanied by the name of the person inquiring, not for publication, but as evidence of good faith. The identity of those seeking information on technical subjects will not be disclosed.

Letters expressing opinions or voicing criticism are cordially invited. These will be signed by the correspondent's name unless in the letter itself contains a request that the name be withheld.—EDITOR.

Hank Sizing Worsted Yarn

Technical Editor:

In the hank sizing of fine worsted, what method is used to keep the size from running down to the lower end of the hanks as they hang on the poles? We are using hank-sizing in increasing amounts and we have the difficulty above cited. We have overcome this difficulty by making a rotating frame which turns over gradually as the hanks dry. This, however, is slow and expensive as compared with other ways which we believe are in use.

We propose now to "extract" these hanks before they are dried, but we do not have the experience to tell us whether we can extract them in a hydro-extractor sufficiently so the water and size will not run to the bottom, as described above. Specifically, therefore, we write to ask you if there is a point of extraction beyond which this settling of the water and size in the hanks, while drying, can be avoided?

Please give us your comments on the whole hank-sizing situation, and make any suggestions which you may have in mind, of means which you seen in use anywhere, as to how this difficulty is overcome. (7267)

The best way to keep the size from dripping and running down the yarn is to reduce to a minimum the amount of size solution left in the yarn before it is hung up to dry. However, if the present formula is used, it may be that reducing the size as much as this would leave the yarn too soft. In this case we should increase the strength or concentration enough to correct this.

We have seen the same method and material used to size worsted hanks that are used to size rayon in the skein form. This consists of using a gelatine or glue size to which has been added a little softener. The skeins are worked in this solution lukewarm, 100°F., for ten to fifteen minutes, or until they are thoroughly and evenly saturated. The skeins are then lifted from the bath and allowed to drain. This is done because the bath is not exhausted and can be freshened up by adding a little more size and water—and hence can be used over several times. The skeins are then hydro-extracted until they do not drip any more at the outlet of the extractor. We cannot advise as to the length of time, because this will depend upon the size of the extractor and its speed. We should use a small, high-speed machine. When the extractor ceases to throw out solution, it is safe to assume that none will drip or flow to the bottom when the skeins are hung up to dry.

In order to prevent the skeins from drying in set form or shape, they should be given a quarter turn at intervals during the drying. There are a few skein dryers in use today which consist of a large reel with rods extending from one side to the other. The skeins are hung on these rods. The reel rotates in a heated room and the skeins are dried rather quickly at a low heat. The only objection to this type of machine seems to be the space that it requires.

The outstanding objections to skein sizing are the slow production and the labor charges, which are high as compared with warp sizing. The initial installation for skein-sizing equipment is much less than for a warp-sizing machine, but the warp-sizing machine has a greater output and requires less help to operate.

Warp sizing gives a better warp, because the threads are kept separate and under tension; while the skein-sizing method does not give as much yardage, due to this lack of tension. Then, too, in the skein-sizing system there is more sticking of the threads, with the result that the yarn is not so smooth. The best way to reduce this tendency of the threads to stick together is to shake the skeins out frequently. This is done as soon as they come out of the extractor and while they are being given the quarter turn on the dryer. They should be shaken out again after they come off the dryer, before beaming.

Sized work will run better if the drying is conducted at as low a temperature as possible. Large quantities of warm air are better than a limited volume of very hot air.

As we see it, the most important thing to watch when you change from your present method to the hydro-extracting method is that you get the same stiffness and size. This will probably be accomplished by strengthening the size solution to compensate for the amount that is taken out of the warp by the extracting.

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Spiral Streaks in Half Hose

Technical Editor:

Can you throw any light on what causes the streaky effect in the half hose enclosed herewith? These socks were made of 45-denier Celanese twisted with 150-denier rayon, with 4½ turns, and then cross dyed. I have always heard that any defect in the knitting yarn followed of a necessity the course of the yarn, but you will notice these defects do not do so.

Some say that slack twist is causing the yarn to plate; others say that the tension disk on the machine is causing the twist to open up. Others believe that the quality of the Celanese is causing it to dye up in this way, but candidly I do not think that has much to do with it. Any light you can throw on this trouble will be gratefully appreciated. (7259)

The yarn raveled from the sample submitted has, without a shadow of a doubt, uneven twist. As the yarn is raveled and examined, it can easily be seen that there are places nearly an inch long with practically no twist, while other places have an appreciable twist.

Our tests on 10-in. lengths show that the average twist is about 4.5 turns, but that for 2-in. lengths the turns vary greatly. The following are for 2-in. lengths with about one inch between each test: 8, 2, 4, 8½, 6, 10½, 4½, 9, 11, 5. This shows a variation from as little as one turn per inch to as much as 5½ turns per inch. Where there is little twist, the black seems to predominate because of being coarser, and so causes the dark band.

The reason the band does not follow one course is that the twist varies in short lengths—much too short to go around the leg. However, coming at fairly regular intervals, they come in such a way as to keep moving ahead a little, and so form a spiral.

We are convinced that the Celanese is not giving any trouble as far as dyeing is concerned. Because of the difference in the counts twisted, there is a tendency to form a "corkscrew" yarn, but this should give no trouble in knitting. In order to determine whether this trouble is in the yarn previous to knitting, it will be necessary to wind some in a small skein and dye it.

We hesitate to say where the trouble originated without seeing several cones of the original twist as received from the winding. Also, it would be necessary for you to give us all the details of twisting and winding, including the make of machine and the size and type of bobbin.

◆

Specific Gravity of Cotton

Technical Editor:

What is the specific gravity of air-dried cotton and of bone-dry cotton? (7283)

The specific gravity of air-dried cotton is about 1:51; and of bone-dry cotton, 1.55.

◆

Lines Running Lengthwise in Rayon Crepe

Technical Editor:

We are enclosing herewith a sample of rayon crepe showing irregular lines running lengthwise which appear after the cloth is dyed and finished. You will please note that from the same warp some pieces will finish right, and others come out as shown in the sample.

The finisher claims that the trouble is due to the sizing used on the warps before weaving, while we know that the same process of sizing is being used on hundreds of warps without showing any effects on the finished cloth. Will you please advise us what in your opinion causes this trouble, and what could be done to eliminate it? (7247)

We find the cause of these lines to be due to uneven tension of the warp threads. We understand that from the same warp some of the pieces finish up satisfactorily. The reason this fault does not show up immediately after the cloth is woven is that the sizing on the warp keeps it stiff and also fills up these irregular lines.

In making the warps for this material the utmost care must be exercised, Do not put a full replacement spool on the creel if the rest of the spools are under three-quarters full. Try to keep all spools on the creel as near the same size as possible. While beaming, keep all the tension possible on the warp and be sure to finish the beaming immediately after starting. Never leave the warp over night with part on the wheel and part on the beam. We also advise beaming on paper, one paper to every eight or ten turns of the warp on the beam.

If you have it all warped and ready for weaving, the solution is to lower or raise the whip roll, depending on whether you are weaving the goods face up or face down. Also add more weight to the beam while weaving.

THOUSANDS of inquiries are handled annually by the Technical Editors. In order that as many readers as possible may benefit from this service, we select problems of general interest for publication each week.

◆

Effect of Moisture in Silk Testing

Technical Editor:

I am writing you in reference to a question that came up in our silk-testing department. It is in regard to the influence the different percentages of humidity have on the elongation and elasticity of silk. At the present time we cannot control our temperature and humidity so as to have them standard for our silk test, say 70° F. temperature and 65% humidity.

In one serigraph test we made on a grade AA silk, 13/15 denier, the results obtained were as follows:

Average tenacity — 3.7 grams per denier
Average elongation—16.3%
Average elasticity — 1.87 grams per denier
Temperature —74°
Humidity —57%

The elongation on this silk should be around 20%. The reason it was so low, I thought, was on account of low humidity, so I made a wet test of the same 400 strands of silk, and the results were as follows:

Average tenacity — 2.95 grams per denier
Average elongation—33.3%
Average elasticity — 0.765 grams per denier

I came to the concluson that if we had standard conditions, our elongation would go up but our elasticity would be somewhat lower. Are there any standards in elasticity for the different grades of silk? The elasticity was measured by drawing a straight line from the starting point on the chart to the yield point where the line starts to curve upward.

We shall appreciate any criticism or comment you care to make on our opinion formed from this test. (7250)

A dry atmosphere causes the sericin to become hard and brittle ,and this decreases the elongation. The tenacity slightly increases due to the increased cohesion of the molecules of the sericin. The low elongation shown may have been due to a number of brittle threads which elongated under 10% and broke out before the average elastic limit was reached. This can be observed if the

test is stopped when the threads have elongated 10% of the number of broken threads counted. There is no standard for elasticity on the serigraph chart as the load strain curve does not represent that quality to any degree of certainty or practical application.

When a thread of raw silk is tested wet for tenacity the water softens the sericin and makes it plastic, and in that condition it shows little or no strength at the breaking stress.

The difference between the tenacity tests, wet and dry, averages that of the raw boil-off, or about 18.4%. The average tenacity dry is given as 3.7 grams per denier. Counting 3.75 grams per denier or representing 100%, we have 3.70 ÷ 3.75 or 98.6%. The average tenacity of the wet is given as 2.95 grams per denier. On a basis of 3 grams per denier as representing 100% on wet silk, we have 2.95 ÷ 3, or 98.3%—or practically the same relative value. This agreement indicates that the silk is satisfactory in strength. You will find that the average tenacity of boiled off silk represents closely that of the raw silk when tested wet. When the wet test indicates 100% strength and the test on the dry silk is under that, five or more per cent, it may indicate that the sericin has been weakened by some unusual condition but that, as the fibroin is up to par, the product will be of the highest quality as far as this test indicates the character of the silk.

◆

Finishing Shoddy Tricot

Technical Editor:

I should like to know the best method of finishing wool tricot (80% shoddy) to maintain the best luster possible. I have a double-acting napper, single napper, double-acting gig, steamer, up-and-down wet brush, shears, press, etc. The goods are fulled about 3½ hours. Is it necessary to use the napper much? (7237)

To finish this type of fabric, full in the grease with the usual scouring solution, making sure all impurities are free from the cloth, and extract well enough to send to the gigging machine. Inasmuch as the character of the weave must show, napping can be dispensed with; all that is required is to comb out slowly the fibers necessary to give a good face appearance, without getting down to the very bottom of the fabric. The gigging can be accomplished in about 1½ hours to the piece; use old teasles the first ½ hour, inserting better teasles the last half of the running time. The goods need not be thoroughly soaked, but just wet enough to have the teasles comb easily.

Wet cropping is not necessary, the next process being wet steaming. Good judgment is required as to the amount of time necessary to produce the luster required without getting the goods tender. First of all, have leaders about 5 to 6 yd. long made from a good grade of muslin with about 10 to 12 yd. of burlap sewn together. Sew the muslin to the piece; or better still, sew two pieces together; then sew a leader to each end of the piece with the muslin next to the piece and the burlap next to the steamer cylinder. When the goods have been rolled onto the steamer, it is well to turn on cold water until the roll is thoroughly wet through; then turn off the water and turn on steam slowly until the vapors show evenly all the way across the piece. Work of this description and weight should stand about 35 lb. pressure and anywhere from 10 to 15 min. on each cylinder; this, however, can be best determined by the man in charge. Cooling of the cylinder must be performed carefully. Repeat the operation on the front cylinder, rolling the goods up on rolls for at least 24 hours and turning them end for end at the finish of the day's work before sending them to the dyer.

Carbonizing can be done after dyeing. After dyeing straighten the goods on the teasle or up-and-down wet brush for about 30 min. Next, the fabric is dried, sheared to the length required, given a good steam brushing dry, and pressed.

◆

Coated Cotton Cretonne

Technical Editor:

We are enclosing a sample of coated cotton cretonne. Can you give us any information as to how to prepare a lacquer which will produce a coating the same as is on the sample? (7230)

An examination of this fabric shows that it is coated with a glaze consisting mostly of starch, together with glue or casein and oils. It has the appearance of a lacquer, but is readily removed by water and especially by contact with the moist tongue, which converts the starch to soluble products. In former years a large quantity of plain-colored material was given a similar glazed surface and used as tobacco bags. The finish is applied to one side of the fabric by means of a backfilling starch mangle. The goods are finished on a hot friction calender.

The manufacturers of lacquers could readily furnish a flexible finish which would be waterproof, but it would be necessary first to give the goods a sizing coat, otherwise the lacquer would penetrate the goods and, instead of giving a finish on one side only, would stiffen the fabric like a board.

◆

Effect of Temperature on Knitting

Technical Editor:

Some fixers claim that they have to loosen up on the knitting machines at night if the room gets a little cool in order that the stocking may fit the board. The day man claims he has to tighten up in order to make it fit. Do you believe that this is necessary? What steps can be taken to render it unnecessary? (7243)

It is a fact that a stitch will tighten very slightly on seamless knitting machines with extreme range in temperatures—this being especially noticeable in the very fine-gauged machines. Most mills size at about nine o'clock on the day shift, when the machines have been in operation an hour or more, and it is a usual practice to check the sizing at about three o'clock in the afternoon. An effort should be made to maintain even temperatures at night, so that the sizing will not be disturbed. This can usually be accomplished by keeping the windows shut after sundown. In actual practice this difference is usually very slight, and possibly changes in the yarn may be responsible for upsetting sizing of the hose instead of changes in temperatures.

In conclusion, we recommend that an effort be made to have average temperature in the knitting room day and night, and to size the machines after they have been in operation an hour or more and free from the gumming effect of stiff oil.

New Machinery & Processes

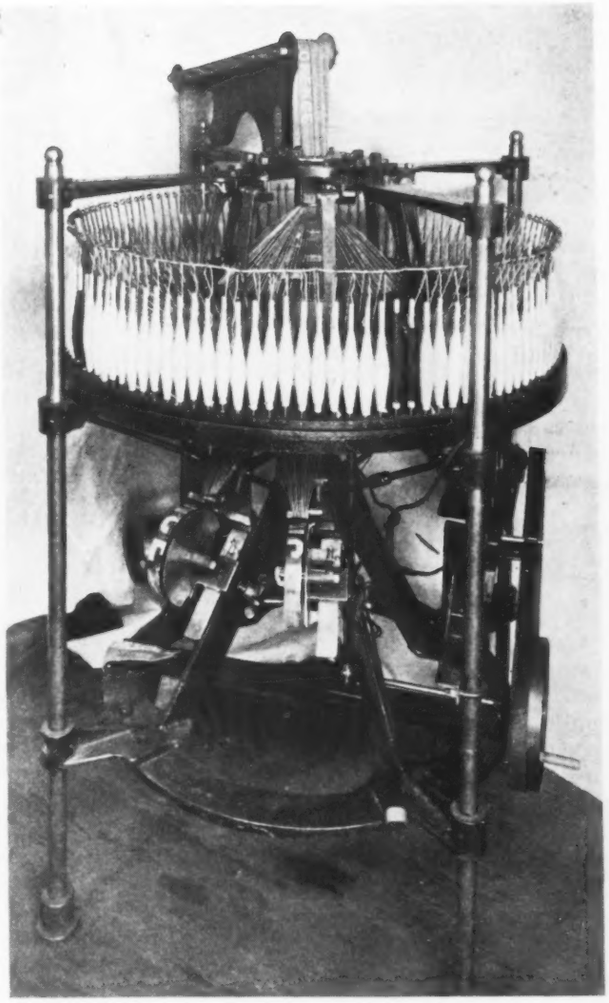
Circular Loom

MANY students of mechanism have found fault with the principles on which the ordinary loom is based. Many attempts have been made to develop a more suitable design. It has long been recognized that a circular loom with rotating parts would permit higher speed and would eliminate the shock, vibration and wear which result from the ordinary reciprocating motion. Such a loom was demonstrated the other day to a member of our technical staff in the office of the inventor, Robert G. Clark, at 371 Fulton St., Brooklyn, N. Y. The patents covering it have just been issued.

The loom as demonstrated was weaving a tubing three or four inches wide at the rate of 250 picks per minute. There appears to be no reason why a loom cannot be constructed on the same principles to weave a much larger tubing. As might be expected, the construction of this first model is rather crude; but the inventor believes that the speed could be increased to 400 picks per minute by more efficient construction of the various parts.

The loom is equipped with both warp and filling stop motions designed on an electrical principle. A designing attachment permits the making of a variety of jacquard designs more simply than can be done on the ordinary type of loom. The only thing missing seems to be a method for automatically replenishing the filling, but Mr. Clark states that he has already developed an attachment for this purpose and wishes to obtain a patent on it before making the details public.

As may be seen in the accompanying photograph, the warp on the present model is supplied from a circle of stationary bobbins from which the yarn is drawn over end. Mr. Clark states that the warp could be drawn just as readily from a series of loom beams placed around the frame. From the eyes above the warp bobbins, the ends pass downward through drop wires, which provide tension and also a means for stopping the loom automatically when an end breaks. When the drop wire falls, it comes to rest on a metal ring, which is concentric with the general form of the machine, thereby closing an electric circuit which opens the motor switch. From the drop wire the warp ends pass through a circle of hooks, which is located at the same height as the base of the warp spindles but nearer to the center of the machine.



Circular loom

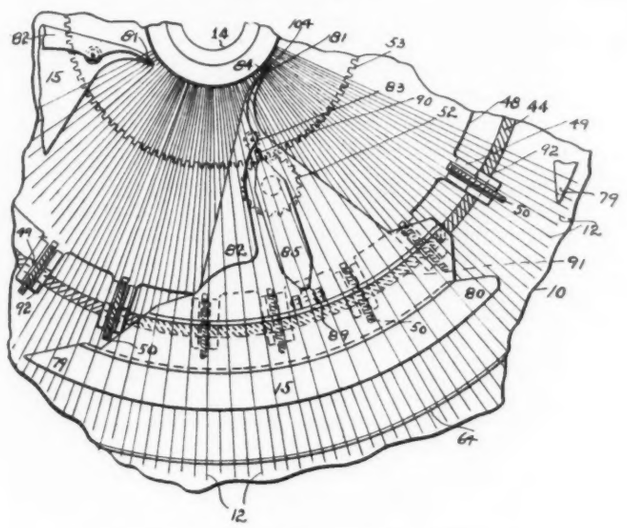
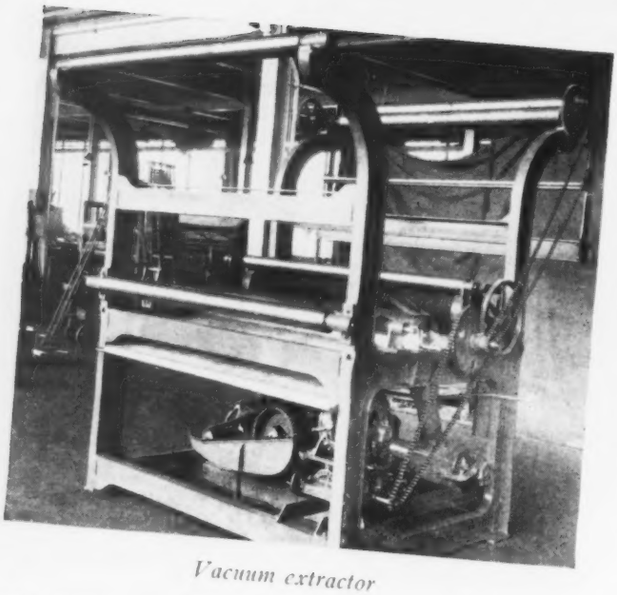
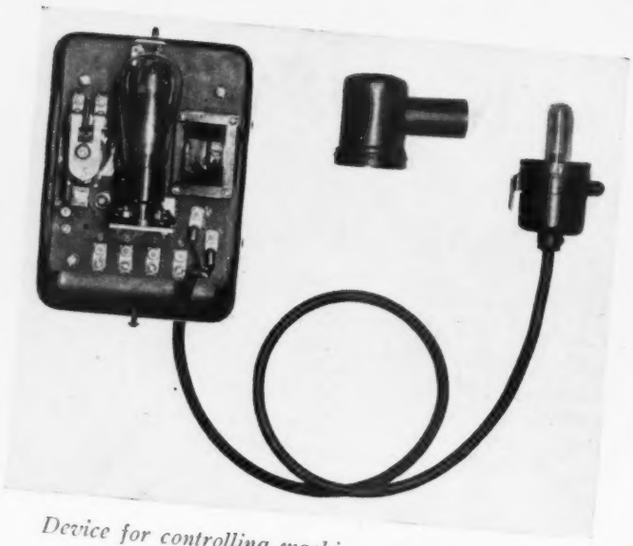


Diagram from circular loom patent, showing construction of shuttle

From this circle of hooks, the ends pass upward through slits in a metal girdle, which serve to hold the ends in place, to the top center of the machine. The shed is created by a circle of upwardly projecting fingers, corresponding to the heddles of the ordinary loom, located just above the circle of hooks. These fingers are moved up and down in accordance with the shedding desired, by means of revolving cams which are concentric with the general form of the machine. These fingers may be moved in accordance with any design called for, by means of another set of fingers which engage them and which are moved by any irregularity on the surface of the design drums. These drums, and the fingers which play upon them, may be seen in the accompanying photo-



Vacuum extractor



Device for controlling machinery by interruption of a beam of light

graph, located in the lower part of the machine. It will be noticed in this photograph that cardboard letters spelling the word "Florence" have been pasted on the surface of these drums and that the word appears in the woven fabric at the top of the machine. Any design thus applied to the surfaces of the drums will be reproduced in the fabric without the necessity of pegging a chain or punching holes in cards.

One of the first questions which arises in the average mind regarding the possibility of a circular loom is how the shuttle may be driven. In Mr. Clark's invention the shuttle differs very radically from the type used in the ordinary loom. The accompanying diagram represents a view of the shuttle as it is seen when one looks down upon the top of the loom. The spindle 90 which holds the shuttle bobbin 85 is parallel to the warp threads 12, rather than at right angles to them, as in the ordinary loom. The point of the shuttle 79 enters the shed formed by the heddle fingers as previously described, and the gradually widening sheet-metal body of the shuttle opens the shed to its full width. The bottom of the shuttle 15 is more extensive than the top 82, the latter consisting only of a lip of metal turned over from the bottom. As the shuttle moves around the loom it leaves a trail of filling thread at 81, the thread being drawn over the end of the bobbin 85 and through a tension device 83.

On the under part of the shuttle is provided a toothed arc 91. The teeth of this arc are cut on a bias, and are engaged by a series of narrow spiral gears 50, which are in turn driven by the teeth 44 located below them and concentric with the general form of the machine. This gear motion serves to send the shuttle forward, a new spiral gear engaging the arc of teeth as the shuttle leaves the spiral gear which has been engaged longest. As may be seen in the diagram, there are at least four spiral gears always engaging the shuttle. These gears are sufficiently narrow to be straddled by the warp ends of the lower shed.

Having now described the heddle motion and the insertion of the filling thread, it is logical to describe the beating up of the pick. This is accomplished by means of a circle of fingers located just below the warp threads near the delivery end of the shuttle 81. These fingers are operated by cams, which push them through the warp threads and force them upward against the filling thread, thus pushing the filling thread against the pick previously woven. The operation of these fingers occurs continuously in the wake of the shuttle as the shuttle proceeds in its course around the loom.

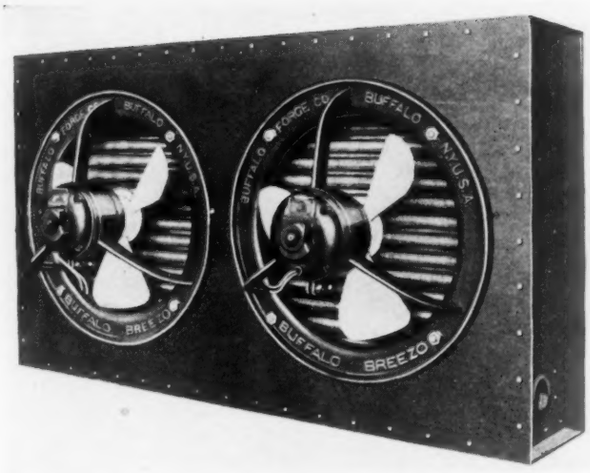
The completed fabric is drawn through a ring at the top of the loom and wound up on a drum. In the model which Mr. Clark has on exhibition, there are four shuttles; and therefore, if desired, four differently colored fillings can be used. There is no reason why more or fewer shuttles cannot be used on models of different size. A drop wire is hung on the filling thread; and when the filling breaks, this wire drops back toward the shuttle and engages an electrical contact, opening the motor switch, as in the case of the warp stop motion. The fabric may be slit by a cutting device on the loom, or it may be cut in a later process. However, for many purposes requiring a seamless tubing—such as bags and pillow cases—no cutting is required, and of course for such fabrics a loom of this nature is most particularly well suited.

Device Uses Light to Control Machinery

OPERATION of industrial machinery and other equipment by utilizing a new device, the photo-electric relay, is announced by the General Electric Co., Schenectady, N. Y. The new relay is essentially a vacuum-tube device, and uses both the photo-electric tube and the pliotron.

Many industrial or other operations in which a change of light is involved can be controlled by the new relay. In addition, many operations which can be arranged to cause a change of light can be so controlled. A machine, for example, which travels in a certain direction for a certain distance and is then stopped or reversed, is a typical application. When the traveling mechanism reaches its limit it would interrupt a beam of light falling on the photo-electric tube and thus cause the control device to function.

Another example of its application is in counting items, such as bags of material, or boxes, where mass production is involved. As each item passes through the essential beam of light it causes the photo-electric relay to operate and thus actuate a magnetic counter. A third



Twin-fan unit heater

type of application is in sorting packages according to size, shape, or reflecting power. Other examples of its possible use are stopping of textile machinery when the fabric breaks, turning electric signs or signals on or off depending on the intensity of the outside light, deflecting packages on conveyors, and operating bag-piling mechanisms.

Use of the photo-electric relay to control lights or illuminated signs according to the intensity of daylight is an interesting one. In an office or factory building it is always desirable to have a certain minimum light for the workers. During the daytime, when daylight intensity is high, no artificial lighting is needed. By using the new relay, the artificial lights can be turned on automatically when the daylight intensity falls below the predetermined minimum.

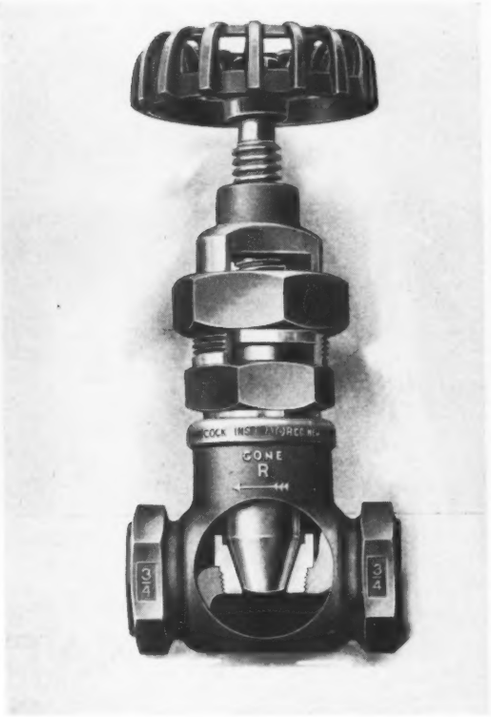
The following advantages are claimed for the new device: (1) It operates without shock or resistance to the progress or movement of the object which actuates it, or without impairing the accuracy of delicate mechanisms; (2) it can be located remotely from the equipment controlled, thus permitting mounting in small spaces around automatic machinery; (3) it is adjustable in sensitivity; (4) it can be used outdoors by mounting in a watertight enclosing case; (5) it is easily installed, and its operation is easily adjusted or changed; and (6) it can be operated at high speeds, 100 times a minute being an approximate maximum.

Vacuum Extractor

OPEN-WIDTH extraction of a wide variety of fabrics is made possible by means of a vacuum extractor placed on the market recently by James Hunter Machine Co., North Adams, Mass. The machine which has a speed range of 3 to 40 yd. per min., is designed to give even extraction over the whole width of the goods.

Suction is applied through a V-shaped nozzle, while a reinforced slot is adjustable to suit either light or heavy fabrics of either open or close weave. A rotary pump of the valveless type insures steady and uniform extraction.

The machine is a self-contained unit of rugged construction and may be operated by unskilled labor. Two motors, one for the pump and one for the goods, are furnished with overload and low-voltage relays, and with



Cone seat valve

push-button control which is located within the operator's reach.

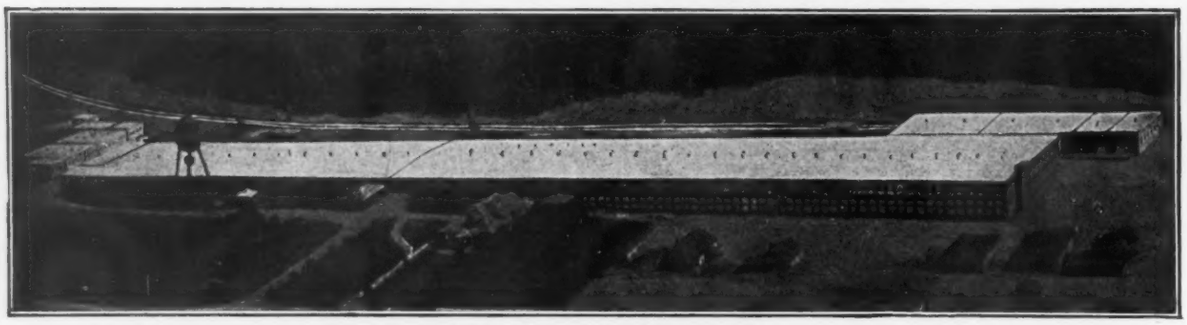
A gage indicating the vacuum, together with a relief valve, enable the optimum suction to be maintained. Other features of the extractor include a strainer to remove lint from the air, safety devices for the protection of the operator, and Alemite-Zerk lubricating system requiring attention only every six to twelve hours.

Unit Heater

BUFFALO FORGE CO., Buffalo, N. Y., has recently developed a new type of twin-fan unit heater. The heater is equipped with two 16-in. fans and a light-weight, non-corrosive Aerofin heating coil. When desired, one of the fans may be shut down, thus lowering the steam and power consumption. In this type of unit only one set of steam and drip connections is necessary. The manufacturer states that this type has the lowest B.t.u. cost of the entire line of unit heaters and that it is quieter in operation than single-fan heaters of equivalent capacity.

Cone Seat Valve

BROUGHT out recently by Consolidated Ashcroft Hancock Co., Inc., Bridgeport, Conn., is a cone seat valve enabling accurate throttling of steam. The valve is particularly suited to power-plant and industrial applications where a uniform flow of steam is required. Since the flow of steam is regulated positively for each turn of the valve, the operator can be assured of having the same flow of steam day after day by opening the valve to the same point each time steam is turned on. This feature of the valve makes it especially advantageous not only in high-pressure central stations, but in all process work where close control of steam flow is important.



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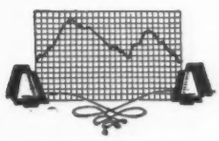


Cotton Outlook Still Continues Poor

Demand Probably Will Be Unequal to New Crop, Says Dr. Haney

SUMMARY

The cotton situation is somewhat weaker than a month ago, but, barring changes due to weather conditions, the price of raw cotton may be expected to fluctuate near the 13c. level.

Curtailment of yarn production suggests some improvement in spinners' margins, but gray-goods manufacturers are less favorably situated.

•

The analysis and forecast by Dr. Lewis H. Haney, Director, New York University, Business Research Bureau, which regularly appears on this page, considers various branches of the textile industry from week to week. The conclusions reached in the Analyst are mostly forecasts and generally apply to a time two or three months ahead. The Analyst is based on statistical data and does not reflect temporary trade sentiment.

THE chief fundamental statistical changes in the raw cotton situation during the past month have been (1) the further curtailment of demand, both foreign and domestic, and (2) the announcement of a small reduction in acreage sown this year as compared with last. The trouble lies with both demand and supply. World conditions continue depressed. The current rate of world consumption is probably not equal to the size of the new crop, and the carryover for the present crop year is the largest since 1921.

There is no basis for revising our guess of last month as to prices. Recent developments indicate that any change would be toward the lower limit. The usual weather uncertainties are here again, and no official crop estimate has been made. We see no reason why the price might not fall below the low of December, 1927, and would not be surprised to see the 11c. cotton of 1921 again this season. A revival of business throughout the world, however, might raise the price to 14c. rather quickly.

Bull Points

1. Spinners' replacement margins were slightly higher during July.
2. Reports indicate that the 1,250,000 bales (approximate) controlled by the corporation will not be dumped.
3. The hot dry weather has retarded the crop in the western belt.
4. Curtailment has brought mill consumption and spindle activity far below normal, and is rectifying previous maladjustments as well as facilitating improvement of margins.
5. Stocks of American cotton at European ports on July 11 were 814,000 bales, as compared with 893,000 bales a year ago.

Bear Points

1. Acreage planted was reduced only 2.7% on July 1.
2. The weather has prevented much insect damage.
3. The domestic supply available at the end of June was the largest since 1921.
4. Mill consumption and spindle activity in June were the lowest since 1924.
5. Manufacturers' replacement margins during June were, with the exception of two months in 1924, the lowest in ten years.
6. The statistics of the New York Cotton Textile Merchants' Association were again bearish.
7. New York cotton jobbers' sales in June were the lowest during the twelve years that they have been compiled.
8. The drastic cuts in rayon and silk prices leave cotton in a poor competitive position as a textile fiber.

Statistical Position

The annual rate of mill consumption has been declining during recent months, with the result that the total amount of cotton consumed by domestic mills for the season will probably not be much over 6,100,000 bales. Exports are also running low and the total to July 31 will probably fail to reach 6,800,000 bales (not allowing for re-exports). This disappearance of about 13,000,000 bales would leave the carryover at about 4,100,000 bales. Allowing 300,000 for the "city crop" the net total would be 4,200,000 bales.

Based on the cut in acreage of 2.7%, a yield of 14,200,000 to 14,500,000 bales is the expectation for the new crop. Thus, on Aug. 1, an available supply of 18,500,000 bales is likely. This compares with an available supply of a year ago of 16,858,000 bales. The prospect of an increased world consumption is not so bright, because the new crop year is not beginning near the peak of a business cycle. However, it has been the custom for Europe to replenish stocks of American cotton when the price has been as low as it is now.

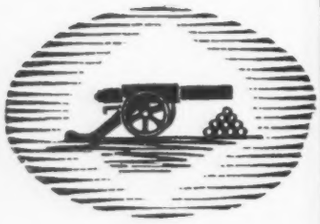
The adjusted index of domestic mill and warehouse stocks at the end of June was the highest since 1921. The world's visible supply of American cotton on July 26 was 2,984,000 bales, against 1,787,000 bales a year ago.

World spinners' takings to July 26 were 13,689,000 bales, as compared with 16,195,000 on the same date last year.

Supply and Demand Maladjustment Worst Since 1921

The general cotton barometer chart during June took another unfavorable turn. The supply available for the season ending July 31 increased more sharply than in any month of the crop year; mill consumption fell to a new low since 1924; manufacturers' replacement margins were also the lowest since then.

The domestic supply of Americn



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for the Southern States

CANNON YARNS

cotton at the end of June was the largest for any month since June, 1921. But, in 1921 a sharp reduction in the new crop was being discounted. The present crop-year carryover will probably be at least 1,500,000 bales smaller than in 1921, while the new crop may be as large as 14,500,000 bales this year as compared with 7,978,000 for the 1921-22 season. Prices averaged below 12c. in June, 1921, and it is not unlikely that they will do so again this year.

Mill consumption declined sharply in June, and, judging by the cloth statistics for that month, further curtailment is to be expected. This curtailment will check the decline in manufacturers' margins which, with the exception of two months in 1924, are the lowest in over ten years. But all this signifies a lower domestic demand for raw cotton and no strength in price.

Yarn Prices Not so Weak as Raw

The Textile World index of cotton yarn prices during July was 65.4% of the average for 1921-25. This compares with 68.1% in June and 85.8% a year ago. The July average was the lowest since August, 1921.

No encouragement is to be found on the demand side of the price equation. On the supply side, however, the drastic reduction in spindle activity has brought the index down to the low levels of the summer of 1924. This curtailment has helped to strengthen the spinners' replacement margins, for a slight gain was registered during July. It is probably safe to conclude that cotton sales yarns will show no more weakness than does raw cotton.

Gray-Goods Markets Weak

There is no sign of improvement in the cotton-cloth markets. The Textile World Index of gray-goods prices in June was 63.1% of the average for 1921-25, against 67.9% in May, and 77.9% in June, 1929. During July the markets were more stable and tended to recover somewhat; but new low prices for raw cotton have checked any further rise.

The statistics published by the Cotton Textile Merchants' for June were almost universally bearish. Sales fell below shipments, and unfilled orders declined to the lowest levels since June, 1926. Shipments fell below production, and stocks rose to the highest level during the five years' record.

Confirmation of the decline in demand is to be found in the figures showing that sales of New York cotton jobbers, as compiled by the Federal Reserve Bank of New York, fell to the lowest level in the period of twelve years during which the record has been compiled. Furthermore, wholesale dry-goods sales declined during June, as did the orders for gray yardage reported by the National Association of Finishers of Cotton Fabrics for May.

General business is still declining. Obviously, purchasing power is dwindling and no recovery is in sight for at least several months. Curtailment of production is being carried out, but stocks have not yet begun to decline, nor have unfilled orders begun to rise. Cheap as the raw material has become, manufacturers' replacement margins have continued to narrow, and it is probable that the new low levels touched by raw cotton during July will be fully reflected in the price of cotton cloth.

Table I

	World Supply American Cotton Available for Season (Mil. Bales)	Ginnings (000 Running Bales)	Total All Cotton Available June 1 (Mil. Bales)	July Average Price	Season Average Price
1929–30	*19.5	14,544	5.0	13.06	16.59
1928–29	19.7	14,296	2.9	18.62	19.65
1927–28	20.5	12,783	3.1	21.71	20.33
1926–27	23.9	17,755	4.2	17.99	15.07
1925–26	19.7	16,122	4.3	18.69	20.52
1924–25	16.6	13,639	1.8	24.68	24.74

*Preliminary

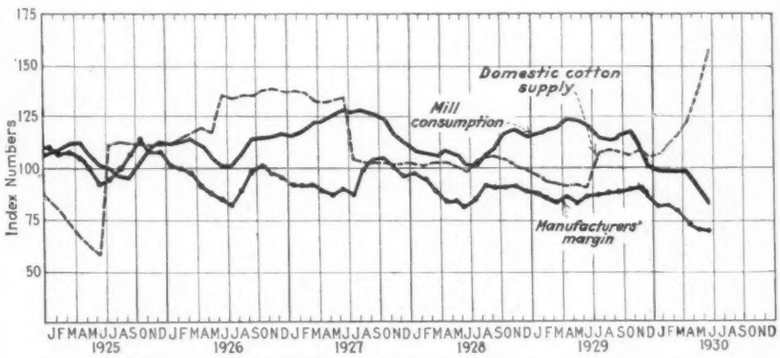

Index Numbers
175
150
125
100
75
50
Domestic cotton supply
Mill consumption
Manufacturers' margin
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1929
1930

Fig. 1. GENERAL COTTON BAROMETER: Consumption—Average Daily Adjusted for Seasonal Variation, three-month moving average; Manufacturers' Margin—Average of Replacement Margins; Average Monthly Available—Net Domestic Available for Crop Year Adjusted for Seasonal Variation. 1921-1926 = 100 for all indexes.

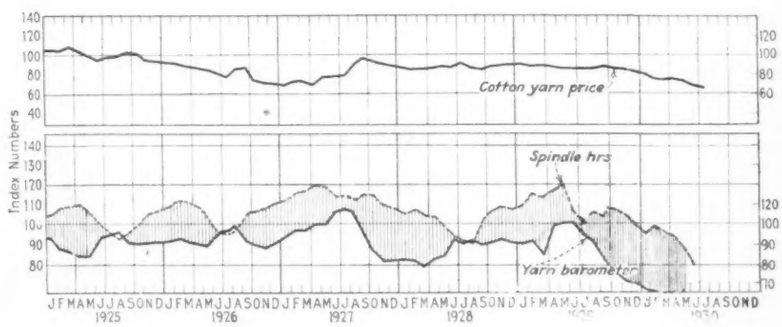

Index Numbers
Cotton yarn price
Spindle hrs
Yarn barometer
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D
1925
1926
1927
1928
1930

Fig. 2. COTTON YARN BAROMETER: Cotton Yarn Price Textile World *Index. Spindle Hours—Three-month moving average (Dept. of Commerce). Yarn Barometer—Based on orders from cotton cloth. Average of recent years = 100 for all indexes.*

The Textile Trend

Cotton Textile Markets: Cotton goods trading slackened considerably late last week after raw cotton touched new lows for the year. Gray-goods prices held up well, although there was some easiness in certain print-cloth constructions. This was most noticeable in the constructions where recent advances had been comparatively rapid. The market position is more sound fundamentally than it was a month ago, when distressed stocks caused print-cloth prices to go off considerably. At the present, raw cotton is lower, but print cloths have not touched the bottom reached then.

Wool Textile Markets

Seasonal influences have kept woolgoods trading very quiet. Interest in the men's wear end is very scant. Tropicals are about the only items moving, and even here consumers do not show any marked disposition to

NATIONAL

"Fleurs Phantomes"... on chiffon ... roses of orange with half tone ground in grey and white.

AUTHORITY... in style, design and feeling... made substantial by a smooth, competent art and design service. The value to our clients of this service is extended by making available, without obligation, contemporary imported designs reported by our foreign style observer.

Authority... in expert and dependable processing... by virtue of long years of skilled experience, financial responsibility and style consciousness... which give to the materials processed by National that authority which is your protection.

"Wimbledon"... for crepe or chiffon ... taupe, rose and white plaid on seafoam ground

"Ça y est"... brown, orange and white flowers with deep rose twists ... light rose georgette ground.

The Scope of National Service

Piece Dyeing—Weighting—Finishing—Moire—Hosiery—Roller and Screen Printing—Rayon and Celanese—Ribbons—Skein Silk—Knitted Fabrics—Mixed Goods.

NATIONAL SILK DYEING COMPANY
Paterson, N. J.

General Offices: East Paterson, N. J. *New York Salesroom:* 152 Madison Ave.
Works: Paterson, N.J., East Paterson, N.J., Allentown, Penn., Williamsport, Penn.
Canadian Branches: Dominion Silk Dyeing and Finishing Company, Limited; Dominion Silk Printing, Limited, Drummondville, P. Q., Canada.

Reg. Trade Mark

PRINTING

place orders. There are still important lines of summer goods that have not been formally opened. Many still speculate about the recent prices named by the American Woolen, and the probable effects on fancy suitings for spring. Openings are expected soon after Labor Day, which is too far off to gage sentiment. Better interest in worsted yarns and prices are inclined to harden where changes are made.

Knit Goods Markets

Knit-goods markets are spotty. Underwear is steady; heavyweights have improved, and agents look for a good August; there is little chance that enough business will come in to balance last year's total. Medium-weight sweaters are moving, but heavyweight demand has slackened; current heavyweight buying stresses part-wool and part-cotton coats selling at $10.50. Hosiery sales are better, and there is less insistence on price. In full-fashioned goods distributors are buying only summer shades; $1.00 stockings are in good call. Jobbers and retailers are more confident and pay greater attention to quality and design in their choice.

Silk Textile Markets

Raw silk has weakened, the gains of early July having been partially offset by a drop of 10c.; buyers are waiting the July consumption figures before placing any sizable contracts. Broad-silk outlook is better; canton crepes and velvets are in spirited demand, and some numbers are reported short. Sheers, metals, and satins also are sought. Weavers note a greater confidence among cutters and retailers. Thrown yarn is firm, with prices steady. Spotty call for grenadines and trams; some mills report good demand. Spun silk quiet but firm; numerous inquiries regarding fall and spring. Some mills have considerable business on hand for fall delivery.

Depressed Mill Share Market

Half Yearly Earnings Not Conducive to Investor Interest

Boston.

THE financial survey this week is without a redeeming feature. Two of the best known mills in the country show very unsatisfactory earnings for the first half of the year while other items cover liquidation propositions to become effective as soon as practicable. Nothing but a scattered interest is seen anywhere in mill shares and it would appear as though investors very generally believed that the textile industry was still in the woods.

At the Boston stock auctions Berkshire Associates stocks were weak while Associated Textiles was strong. The trading was too limited to regard these changes as other than incidental to the market demand at the moment. Old time mills like Lyman and Everett, on their last legs, sold below $1.00 per share. Total sales amounted to 272 shares.

Arlington Has Poor Half-Year

For the first half of its fiscal year ended May 31, exclusive of reserves and depreciation, the Arlington Mills are understood to have suffered a deficit from operation approximating $150,000. The company for the last fiscal year ended November 30 last had an operating profit of $14,339, with a deficit after all charges figured at $783,487. Extremely slack business and a steadily declining wool market, in which the drop was especially drastic on the grades of wool utilized by Arlington, account for the showing. Unless there is a recovery during the current half-year, the Lawrence mill can hardly avoid a heavy loss for the full year. The steadiness of wool prices for some weeks gives promise of a degree of stabilization that will eliminate the prolonged shrinkage of inventory values. The one bright spot is the combing mill, flooded with commission orders and running full.

American Thread Earnings

Report of the American Thread Co., Inc., for year ended March 31, 1930, shows net profit of $1,309,053 after interest, depreciation, Federal taxes and inventory adjustment, equivalent, after dividend requirements on 5 per cent preferred stock, to 88c. a share (par $10, of which $9 is paid up) earned on 1,200,000 shares of common stock. This compares with $1,710,941, or $1.22 a share, in preceding year. Statement for year ended March 31, 1930, compares as follows with 1929:

	1930	1929
*Net trade profit.....	$1,309,053	$1,710,941
Preferred dividends..	244,994	244,990
Common dividends..	810,000	1,080,000
Surplus.....	$354,059	$385,951
Pension fund.....	200,000	300,000
Surplus.....	$54,059	$85,951

*After interest depreciation, Federal taxes and inventory adjustment.

Pacific Mills' Poor Showing

A net loss of $1,139,148 after all charges, but before Federal taxes, is reported by the Pacific Mills for the six months ended June 30 last. This compares with a profit of $662,565 shown for the corresponding period of 1929. Net sales for the period totalled $20,067,781 against $24,414,981 in the same 1929 period and $20,872,057 in 1928, when a net profit of $307,085 was shown. Gross profit this year was $702,863 as compared with $2,094,996 in the first half of last year and $937,798 in 1928. The balance sheet, as of June 30 last, shows current assets of $22,695,864 and current liabilities of $957,786, leaving a net working capital of $21,738,078. At the end of 1929 current assets totalled $26,686,423 and current liabilities were $1,416,680, leaving net working capital of $25,269,743. On June 30, 1929, the company reported current assets of $28,062,793, current liabilities of $1,309,549, and working capital of $26,753,244.

City Mfg. Corp. to Liquidate

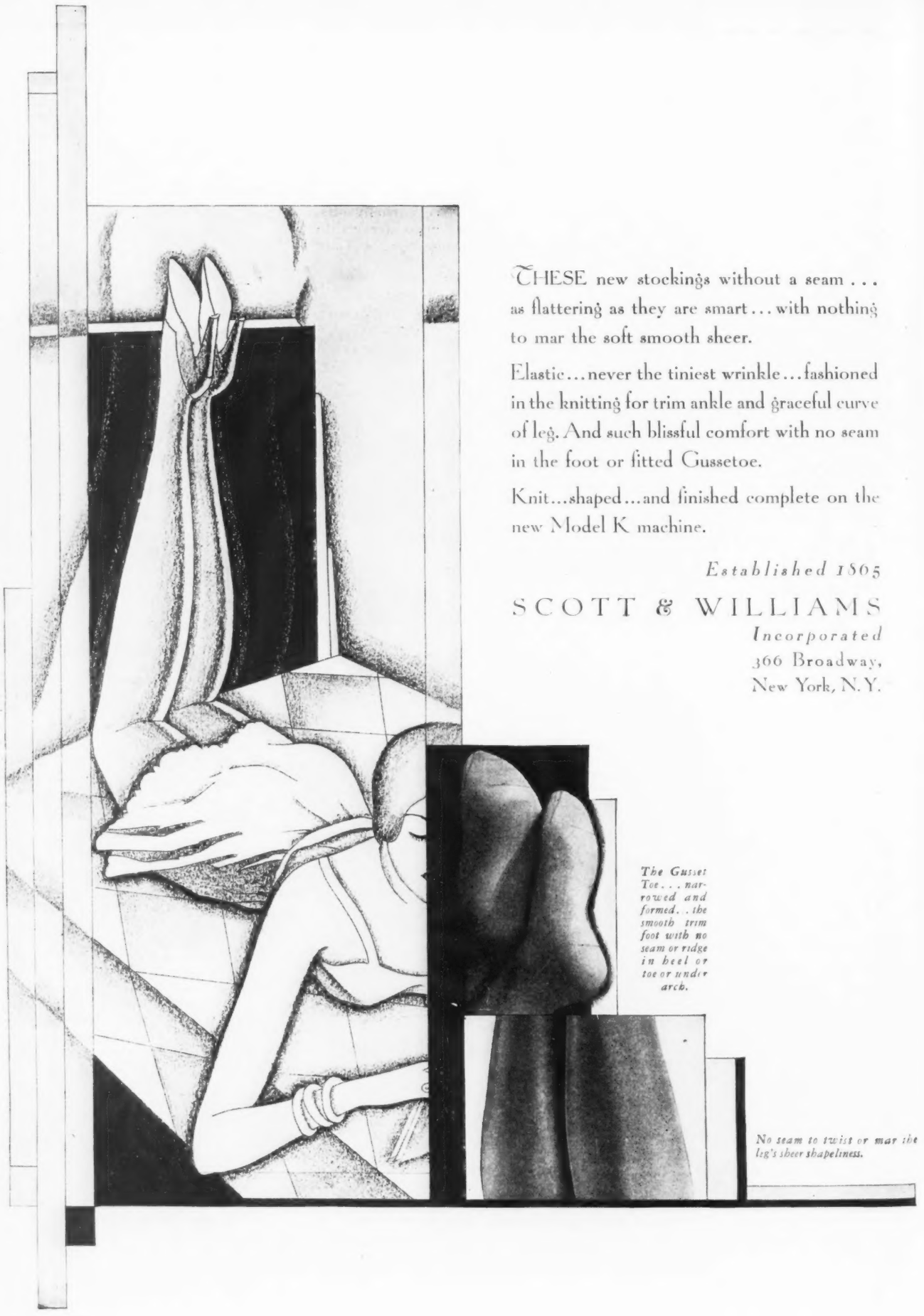
Directors of City Manufacturing Corporation, New Bedford, have voted to recommend liquidation, announces John B. Strongman, treasurer. Letters advising share holders of the corporation of the action taken by the board will be mailed shortly. Stockholders will meet August 6 to consider the recommendation. The corporation has a total of 59,064 spindles and 400 looms engaged in the manufacture of cotton yarns, fine cotton and silk goods. Its yarn mill is located in New Bedford and its weaving mill in Taunton, Mass.

Union Cotton to Liquidate

Acting on the recommendation of the directors of the Union Cotton Manufacturing Co., Fall River, Mass., the stockholders of the corporation voted in special meeting that the corporation be dissolved and that its business be liquidated as soon as practicable. There were 9,235 shares of the 12,000 shares of capital stock represented at the meeting through personal representation and proxies; 9,139 shares voted for liquidation and 96 shares opposed. Directors declared initial dividend in liquidation of $1.50 a share, payable Aug. 9 to stock of record July 23, in place of the usual quarterly dividend of that amount due at this time.

Nantanna Worsted Prospects

The Nantanna Worsted Company, Inc., Northfield, Vt., which was petitioned into bankruptcy several months ago, is in the hand of Heber C. Cady, president of the Northfield Savings Bank, following passage of a deed to him as trustee for the holders of mortgages and liens on the property. Under this arrangement, the Nantanna company, organized in 1922, and at one time giving employment to about one hundred people and carrying a payroll of more than $3,000 per week, is now once more in a position to resume operations as soon as business conditions warrant. "Some of the experienced wool manufacturers state the local mill is one of the best equipped in the country" says Mr. Cady. "As the cost was over $300,000, it would seem reasonable that, with a very much less overhead in the present circumstance, the outlook is



THESE new stockings without a seam . . . as flattering as they are smart . . . with nothing to mar the soft smooth sheer.

Elastic . . . never the tiniest wrinkle . . . fashioned in the knitting for trim ankle and graceful curve of leg. And such blissful comfort with no seam in the foot or fitted Gussetoe.

Knit . . . shaped . . . and finished complete on the new Model K machine.

Established 1865

SCOTT & WILLIAMS

Incorporated

366 Broadway,
New York, N.Y.

The Gusset Toe . . . narrowed and formed . . . the smooth trim foot with no seam or ridge in heel or toe or under arch.

No seam to twist or mar the leg's sheer shapeliness.

much brighter than it has been for a long time.

BARKER MILL TO LIQUIDATE

Stockholders of the Barker Mill, Auburn, Me., meeting in annual session voted to liquidate the plant which has been operating in Auburn for sixty years.

The mill is owned by the Little Androscoggin Water Power Co. and was once one of the busiest cotton factories in New England. Stockholders are expected to realize 50c. on the dollar par, with the valuable water rights on the river from which it takes its name and the physical properties of the plant still untouched.

The company was incorporated in the year 1870 and its capital is listed at $680,000. It is equipped with 550 looms and manufactured gray goods, sheetings and shirtings. It was established through the influence of the late Cyrus I. Barker of Lewiston, for many years prominent in the Maine textile industry. It is the city's only textile industry.

SOUTHERN STOCKS STILL DECLINE

CHARLOTTE, N. C.—The weekly review of Southern Cotton Mill shares as compiled by R. S. Dickson & Co. for the week ending July 26 gives the closing bid price of 71.42 as represented by twenty-five common stocks. This figure represents a decline of $1.56 a share as compared with the close for the previous week. Trading was light throughout the week with a slack demand for the preferred as well as for the common issues.

Boston Stock Auctions

The following sales of textile shares were made at Wednesday's auctions:

Shrs.	Mill	Par	Price	Change
40	Associated Textiles.....	100	35–36½	Up 1½
17	Berkshire Associates common.....	100	12	Off 3
7	Berkshire Associates, pfd.	100	59	Off 6
4	Naumkeag.....	100	88	.....
30	Lyman.....	100	50 cents	.....
57	Everett.....	100	85 cents	.....
117	Boston Mfg., pfd.....	100	1¼	.....

Boston Wool Receipts

Receipts of domestic and foreign wools at Boston, also imports at Philadelphia and New York for the week ended July 26, based upon data compiled by the Market News Service of Bureau of Agricultural Economics, Department of Agriculture, are as follows:

	Week Ended July 26	Totals to Date 1930	Totals to Date 1929
Domestic.....	21,940,000	159,220,000	119,900,000
Foreign.....	867,000	46,203,000	73,414,000
Total.....	22,807,000	205,423,000	193,314,000
IMPORTS AT PRINCIPAL PORTS			
Boston.....	867,000	46,203,000	73,414,000
Philadelphia...	462,000	30,862,000	51,460,000
New York....	513,000	28,510,000	46,994,000
Total.....	1,842,000	105,575,000	171,868,000

July Poor Cotton Yarn Month

Second Worst Month Reported This Year

PHILADELPHIA.

FOLLOWING the trend of cotton, yarns have again declined and average quotation of carded is half cent lower than last week. Drop has been slightly more severe in yarns than in the raw material, notwithstanding the previous absence of spinners' margins in many counts. Knitting yarns were formerly less liable to follow cotton downward than weaving, but both have been equally soft this week. Lower prices have not been an incentive to buyers and trading is quiet as any time this year with exception of May.

July has been the second worst month this year with commission houses and the smallest July in respect to volume for several years. Trading has been more than seasonably quiet this month. Spinners are curtailing production to a greater degree than formerly but this is merely off-setting the curtailment among manufacturers in selling centers. Stock yarns have not increased to any degree in this market during the month and fundamentally the market is in position to respond to any stimulus.

PRICES ARE NOMINAL

Prices have declined to such an extent and so continually that manufacturers have lost interest in making large commitments and when they make an offer on fair sized quantity for delivery ahead it is three or four cents under current quotations. Spinners are not interested in such propositions, believing that they should confine their sales at current levels to near-by delivery as far as possible. They say they can sell at a loss next month just as well as now. Why take forward delivery orders several cents under cost with cotton down so low, is the question they ask.

Spinners are asking 24¼c. to 25c. for ordinary quality 20s-2 warps, a few quoting low as 24c. at which sales have been made; 30s-2 warps of same grade sold this week at 29c., spinners quoting half cent higher. Lack of interest from all trades with exception of cotton worsted manufacturers has been reported, these mills taking small lots for near-by shipment. Knitting yarns have sold 22c. basis 10s., spinners quoting half cent higher or at 22½c. level.

There has been more active specifying by knitters this week but the improvement has not been extensive. Both carded spinners and mercerizers find slight increase in takings on old contracts but this has not been general enough to warrant belief that entire knitting situation has changed. Deliveries on old carded yarn contracts have called for medium-weight counts.

COMBED YARNS STEADY

Combed qualities have displayed little change keeping abreast the raw material market and much firmer than carded yarns. There is price-cutting by smaller combed spinners with limited output, but larger factors keep their prices well in hand and no such bargains as in carded are to be found. There is price-cutting in processed yarns by smaller processors but larger factors continue to quote on basis of 76c. for 60s-2. Manufacturers assert they are able to buy several cents under this list.

Mercerizers have a large volume of advance business in hand but they are lacking specifications and several of the larger concerns are operating on greatly curtailed schedules. Price-cutting represents the method taken by several processors to get immediate delivery business. The results have not been gratifying to date.

●

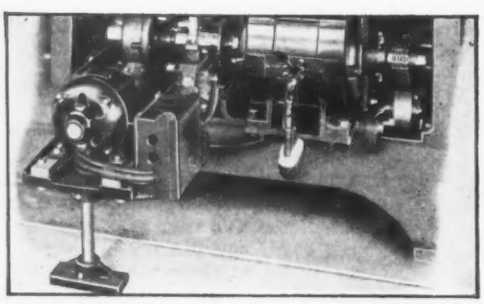
BOSTON. — Cotton yarns open the month with some larger measure of confidence developing in spite of the fact that prices are on the low level of the year and cotton situation is too uncertain to warrant any undue optimism. Yarn sellers report that less yarn was purchased in July than in June and less yarn shipped to customers. July is usually a quiet month and this year the depression in general business caused yarn consumers to lengthen the period of shut-downs. While July has been an exceptionally dull time in yarns, cotton merchandise has been moved along to final consumers in larger volume under the stimulus of hot weather and sharply reduced retail prices.

Low prices continue to be quoted for yarn and keen competition is met on all business offered. Most spinners see no profit in present prices and hesitate to continue on such a basis. In some quarters a disposition to place business for some time ahead is found, but the present market prices are not attractive to spinners and they are reluctant to accept such contracts, many hesitating to quote beyond fall delivery in hopes that a more satisfactory price structure will develop. Fine yarns continue quiet. Little interest in these counts is noted but sampling is going on, buyers making all possible efforts to develop a product that will meet the market.

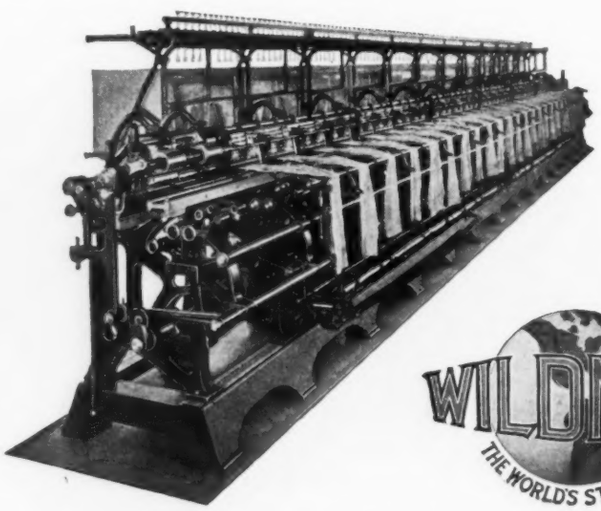
Efforts to bring about improvement

What the self-starter has done for the automobile, the new Wildman Slow Motion Mechanism is doing for the Full-Fashioned Machine.

The touch of a lever replaces strong-arm work.



The new Wildman Slow-Motion mechanism



WILDMAN
THE WORLD'S STANDARD

Let us explain in detail. Wildman Mfg. Co., Full-Fashioned Div., Norristown, Pa.

WILDMAN
FULL FASHIONED HOSIERY MACHINE

have not had the success expected. Spinners, however, are persevering in their efforts and believe that in the long run a better market will be established. Curtailment has been in effect now for several weeks on a fairly large scale and in some instances is to be even more stringently enforced. Carded weaving quotations are on an unsatisfactory level. Weaving yarns, however, are firmer than knitting yarns. Even numbers from 20s to 30s singe and ply are in better shape than for some time. Coarse weaving yarns sell in fair quantities, with the electrical trade buying to some extent. Medium yarns are also fairly active, but higher numbers, while firm, move slowly. Upholstery and carpet yarns remain quiet, with quotations usually on the low side. Trading in combed yarns is very light.

●

NEW YORK—What might be termed a "spirit of resignation," seems prevalent in carded-yarn circles, and it does not seem to be bad psychology with the market in its present state. Sellers are fast reaching the point where they realize the futility of trying to force yarns on customers when they are not receiving any business for their products. As a result there are signs of a lessening of price cutting through the offering of so-called inducements. Not that prices have reached a level of stability, for there are many irregularities about, but dealers are less inclined to engage in a desperate fight for the small amount of business available.

Just at present, yarns are strongly under the influence of cotton. The raw material has been easier the last few days, and it is the time of the year for crop scares. Naturally, buyers can see nothing but lower cotton, and are freely predicting 10c. before long. Another well worn argument of "waiting for the report" has been brought out and carefully dusted off.

No improvement in combed yarn sales has been noticed. There is a chance that prices have become firmer; at least they have not declined, and that is a point in their favor. On Sak and other long staple descriptions, spinners have the tariff as a factor tending towards firmness. Mills have not been able to effect an advance yet, but predict that a sharp rise will be seen as soon as orders become more plentiful.

Worsted Knitting Yarns Improve

Larger Volume Moved Prices Slightly Firmer

PHILADELPHIA.

LOW prices named by the American Woolen Co. for tropicals and staples have had little real effect upon the men's wear situation here, local manufacturers believing that in men's wear fancies, which will be officially shown in September, they will be more than able to meet anything that the large factor may decide to do in fancy prices. For this reason there has been no change in men's wear situation, and spinners are making fair deliveries on old contracts.

Local mills will take yarns fairly actively until middle of August, and after that further deliveries and new mixture contracts will depend upon orders for lightweight goods. Although the new season does not officially open for several weeks, manufacturers in many instances have their new goods available to any buyers who are interested. Mixtures are holding steady at $1.70 for 2-30s, 64s. The season just ending has been fair for a few manufacturers, good with one or two, but poor with the majority.

POOR MEN'S WEAR SEASON

Spinners catering to men's wear trade, meaning Bradford and French mixture spinners, report poor season in volume as compared with previous two seasons. Outerwear demand is improving—slowly it is true, but expansion in volume has been unmistakable and is of such a nature as to lead observers to predict that it will be steady and continuous for the next three months. Last year improvement was noticeable in August, but low stocks and lack of business during the last two months may cause this to develop several weeks earlier this year.

Sampling for 1931 bathing-suits has been large, and call has been for finer-grade yarns than ever before. While stocks of bathing suits are reported large in many instances, indications are that the 1931 season will be another banner one. It may be late in starting, due to these stocks being carried over. Duplicate orders in bathing suits did not develop and spinners of single yarns felt this absence.

One of the most encouraging features this week and last has been the placing of substantial orders for 2-40s, 64s, zephyr yarns. These have been neglected and a disappointment to French spinners who had previously done such a satisfactory volume in this count, which was used in making fabrics for women's knitted dresses. Call has only been noted for two weeks, and spinners are anxious that it continue. Manufacturers have used other type yarns for goods made up to this time.

Should women's three-piece suits be active and zephyr yarns be used French spinners will profit greatly, as they did two years ago, when 2-40s became one of the largest-selling counts.

All lines of outerwear have taken slightly more yarn with one exception—women's sweaters. Infant's wear mills are busier and have been in market, as have manufacturers of men's sweaters. Improvement has been mainly in yarns that are wanted for immediate consumption; there has been little contracting far ahead. Spinners have a fair margin in many instances, and only require volume in order to make money. English-spun weaving counts are an exception to this condition.

A large spinner of single yarns for outerwear announced an advance of 2½c. this week, the first for many months. This is expected to stabilize the yarn market further in spite of the effect of the low prices named on men's wear lines by the largest manufacturer.

◆Spun Silk Is Quiet But Firm

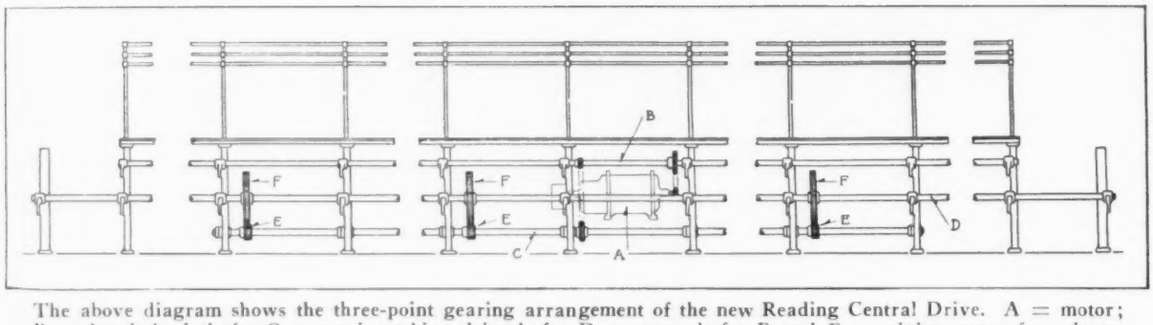
SPUN silk is quiet but firm. Weavers show much interest in fall and spring prospects, and there is no lack of inquiries. Actual orders, however, are light. Spinners are confident regarding the outlook, and expect August to bring a slow rise in demand for September-October shipment. Some mills now have a fair amount of fall business on hand, covering September and October, but as a rule buying is behind this time last year. Spinners report that their customers already are planning the 1931 spring fabric offerings, and that spun silk will be an important feature in the new lines. That interest in 1931 should be manifested so early is considered a good sign. Weavers are well satisfied with the sales showing of their spun-silk fabrics during the past season, and though the fall season may be somewhat light—it is never as big as spring in spun silks—the end of the year is expected to bring the start of firm spring buying.

The woolen and worsted market is quiet; spun silk prices are unchanged.

◆Thrown Yarn Is Uncertain

A CONTINUED uncertainty marks the thrown-yarn market. Demand is spotty, and is restricted to nearby coverage for the most part. Several throwsters this week began writing future business, but the orders are small. The manufacturers are still hesitant regarding fall prospects, though they are more ready to buy than they were four weeks ago. Both grenadine twist and tram yarns are active, with emphasis on the former. Grenadines are considered by some throwsters to be well established now, and, in certain lines, demand is in excess of supplies. Trams, which

A TYPICAL READING IMPROVEMENT



The above diagram shows the three-point gearing arrangement of the new Reading Central Drive. A = motor; B = handwheel shaft; C = torsion-taking driveshaft; D = cam shaft; E and F = pinion gears from intermediate shaft to cam shaft.

The Reading Three-Point Drive

A patented feature designed to distribute the driving force so as to offset torsional strains and the vibrations that accompany such strains in high-speed machines.

An *intermediate shaft* with three driving connections to short, rigid sections of the main shaft produces identical cam action in every section of the machine.

The resulting efficiencies of this new design are apparent—*no inherent vibration, better fabric, less attention or repairs, longer life.*

Textile Machine Works
Reading, Pa.

The "READING"
Full-Fashioned Knitting Machine

were quiet throughout spring and early summer, show some improvement; the pick-up in buying at this end is less than throwsters had looked for, but trams are expected to move steadily from now on.

Production has been increased slightly; stocks on hand are building gradually.

◆Rayon Market Firmer Following Cut

INDICATIONS are that the recent price cut will not cause any prolonged hesitancy in the buying of rayon yarns. The rayon market is slightly stronger this week, thanks to the elimination of doubt as regards prices, and there is a moderate influx of orders. The bulk of current business comes from the knitters, the weavers being still occupied with figuring out the effect of the price revision upon their schedules. Rayon producers are confident that the broadsilk trade soon will begin buying, to cover needs for winter production. The cut has had a good psychological effect on the market, though it is too early to see any real benefit in sales. The trade has been looking for some such announcement for months, and held off buying in anticipation, with the result that yarn stocks in the mills now are believed to be so low as to require repletion.

Business picked up during the first few days following the reduction, but eased again this week. Producers report some requests that the cut be made retroactive. It is understood that the trade will decline concessions at this end, though opinion is divided on this point. Certain companies indicate that they will grant the new low rate only on orders placed on or after July 22, as specified, while others have notified customers that they will date the cut back for a short period.

Demand continues to center on 150 denier, with underwear knitters buying a gradually increasing quantity of the finer sizes.

◆Rayon Thread Waste Stocks Diminishing

CONTINUED diminishing of thread waste stocks is the only current feature of the rayon-waste market. Demand is light and spotty, though thread waste has shown some movement.

Top makers are very hesitant, and the waste dealers do not look for much change at that end before Labor Day. The steady drop in surplus stocks of thread waste offers some encouragement, and the trade is hopeful that this will make for a firming of prices, once the tops begin to move. Prices are unchanged at current low levels. Imports continue light.

◆Cotton Waste Market Quiet

BOSTON.

THE cotton waste market continues a quiet proposition, most buyers doing little else than covering their immediate requirements at as low a price as possible. Prices favor consumers of spinning stocks in particular for, although threads are quiet and the demand for picker and fly is nothing to boast about, these non-spinnable types of wastes are apparently firmer than other materials. Peeler comber is being bought slightly under 11c. and Egyptian comber about ½c. or a little lower. The orders coming in are for a few bales only; rarely does it occur that a carload lot of comber is shipped to a consuming mill.

In the strip section, the desire, if not the necessity, for moving material seems to be a primary object which usually results in purchasers acquiring concessions in price with ease. The output of strips is at all times very large and, although the cotton industry is on a sharp curtailment plan, the output is strictly proportional to the cards running.

In a declining market such as seen at the present time, the obtaining of a normal profit is always very difficult and the only houses able to hold their heads up are those handling wastes on a commission basis. The market has had hard sledding for the year to date and there is nothing in the immediate outlook to suggest anything promising, until at least the size of the new crop becomes more accurately defined. The consuming industry is still curtailing but the demand for picker, fly and threads from their own particular outlets is probably a trifle more satisfactory than the demand for spinnable materials.

IMPORTS AND EXPORTS

The long awaited report on the English cotton industry recently presented to Parliament made a number of suggestions of value and one of particular interest to American exporters of cotton and comber wastes. It was pointed out that British made cotton goods had been largely ousted from the Eastern markets owing to the extensive use by competitors of short staple India cotton. India cotton has been little used in Lancashire where the longer staple but more expensive American cotton has been used almost exclusively. This may be good news for exporters of American comber to the Manchester market.

Imports this year have been on the down grade and the average price of the material imported has been about 1c. per lb. lower than during the corresponding period last year. Imports into the United States for May totaled 2,228,000 lb. at an average price of 4.8c., as compared with 3,796,000 lb. at 5.7c. in May, 1929. Total imports for the period January-May amounted to 12,303,000 lb. at 5.2c., as compared with 20,882,000 lb. at 6.4c. in the similar period of last year, a decrease of 8,579,000 lb.

Cotton Lower Despite Weather

Bearish Statistics Minimize Bullish Crop Conditions

THE cotton market has made new low records during the past week under liquidation of old long accounts and rather more aggressive speculative selling, together with a very slowly developing sale of hedges against the crop. This decline has been in the face of far from satisfactory weather conditions in the South. Nearly all reports indicate that the crop on the average has deteriorated during July. It is true that the drouth reported at the beginning of the month in the eastern belt has been relieved, while there have been scattering showers, fairly heavy in some sections of the central belt; but the Texas crop has deteriorated as a result of dry, hot weather, while the central belt drouth has not been fully relieved. Perhaps the failure of these features to inspire a more general speculative and trade demand has been largely responsible for the increased aggressiveness of sellers, on a theory that a market which does not advance is likely to decline. They have in their background, of course, a bearish statistical position and the current depression of trade, but have had little encouragement in current crop progress.

The development of the end-season statistical position has emphasized bearish features. The preliminary report of the Census Bureau on supply and distribution in the United States for the season which ended July 31 is not yet available. But most of the major items are known, and the figures point to an increase of about 2,269,000 bales of lint cotton of all growths in the end-season carryover, which promises to be in the neighborhood of 4,585,000 bales. Meanwhile, the figures of the New York Cotton Exchange Service placed the world's carryover of American lint cotton for June at only 877,000 bales compared with 1,224,000 last year and estimates of the season's consumption heard in the trade are being scaled down to but little over 13,000,000 bales. The world's carryover of American lint cotton will probably be somewhat over

THE LIST GROWS

More and more Mills are using Diastafor for sizing and de-sizing. That's because Diastafor performs its task with uniformly consistent efficiency.

It frees cotton, mixed goods and even Rayon warps of starch with perfect ease. No special equipment, no expensive machinery is necessary. The well-known Diastafor bung and faucet facilitate quick, clean and easy handling at all times.

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STANDARD BRANDS INCORPORATED

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than under 6,000,000 bales, but as our season's exports have been only in the neighborhood of 6,695,000 bales exclusive of linters, compared with 8,037,729 last season, stocks of cotton at the mills and at distribution points abroad have quite evidently been reduced.

Nevertheless, with a carryover of around 6,000,000 bales, those who are bearish on cotton feel that it will take rather an unfavorable growing season to make a crop of less than 14¼ million bales; so that the prospective available supply is roughly figured at something over 20 million. This would permit of a considerable improvement in the trade situation and increase in consumption as compared with this season's figures, without any threat of scarcity.

Very little spot business has been reported as yet. Spinners seem to be fairly well supplied for their requirements under prevailing trade conditions, until new-crop cotton becomes available.

●

MEMPHIS, TENN., July 28.—The cotton trade here seems to be blowing hot and cold on the business outlook. A week, or a little more, ago there was distinct evidence of optimism. Now the feeling is rather cheerless. Although there has been a fair amount of inquiry, actual business seems to be very slow in developing. Shippers had felt they were making some headway in ironing out differences in price ideas but confess to little or no further progress during the week; the chief difficulties appear to have been the making of new low prices for the season in the futures markets and rains in the central belt, the favorable view of which seems to have been the influence responsible for the decline in contract values.

Also, with the new crop movement already getting under way and with the beginning of the movement in this territory perhaps not more than a month off, merchants are wondering who will take their hedges and are therefore distrustful of prices; this suggests to them the necessity for a higher basis at the same time that it is recognized that the basis they have been trying to get was considered too high by the mills. It is a situation which will work itself out eventually but at the present time is a matter of deep concern.

SPOT BUSINESS SMALL

With receipts increasing daily in the southwest, spot people generally in that section are complaining of lack of forward business. Actual bookings of forward business by merchants in this market are small, compared even with last year, and inquiry has fallen off somewhat, possibly awaiting further light on the crop and the government's first quantitative estimate, due Aug. 8.

The Atlantics received somewhat too much rain during the week, at least in localities; generally speaking the weather in Alabama was favorable, although there are still some dry spots. Rains in the central belt, drouth area, were scattered and mostly inadequate, although a few localities received highly beneficial rainfall; drouth in the central belt is not yet effectually relieved except in a few scattered localities.

●

BOSTON. — Extra staple cotton has been more active during the week but total turnover has been small. Demand, both foreign and domestic, for cotton in general has been dull with an increase of inquiries on the part of manufacturers for new crop long term shipments. In the New England districts prices have been generally firm as to basis and price cutting has shown a decided decrease. Off color or off grade cotton is responsible for practically all the price cutting reported recently. The volume was negligible when compared to the activity in middling prompt shipment cotton. Most of the interest centered in the medium staple lengths, strongest here for middling inch and one-eighth cotton, which was traded in around 300 to 325 on new December, with some houses quoting up to 350 on. Long staple types were slow but one or two inquiries brought quotations as low as 600 on December for middling inch and seven thirty-seconds, though most houses asked 650 on for cotton fully equal to government type. Selected shorter cotton has not been normally active, but there has been some call and limited trading has been done. Government inch and one-sixteenth has been sold around 250 on new December for middling.

Futures touched new low prices for the season recently but sales of actual cotton made a better showing. Buying interest is more active and the majority of merchants are looking forward to an appreciable gain in volume of business. The conviction is gaining ground that as most of the high-grade old cotton is held by the cooperatives and the demand for new-crop arivals will be accentuated the earlier portion of the season. Basis remains virtually unchanged. The average of declines in official southern quotations, covering middling ⅞ in., is 60 points, against 56 for October and 60 for December, New York, the principal basing months.

Wools in Restricted Demand

Generally Firm Position Maintained on Most Raw Materials

BOSTON.

THE raw material situation shows some signs of improvement. Wool and noils are firm, rags and reworks more confident and the only weak spot in this week's survey is seen in some qualities of mill waste. Most of the Boston wool houses are getting a share of the limited business arriving from the mills and as the dull situation is nothing unusual for this period of the year there seems no particular reason for discouragement regarding the future. Offers of business below the prevailing wool level are very generally turned down by wool houses. Prices on wool being bought by mills at this time are as high as at any time since the new clip began to arrive.

The trade is inclined to believe that the second half of the year will show a very generous expansion in mill purchasing. The market, with the tariff taken into account, is on a low cheap basis and, with possibly half of the new clip in very strong hands and with the further proviso that foreign wools the world over are more likely to rise than to fall in price, most factors look for a more profitable merchandising level for domestic wools in the months to come.

WOOL MARKETING POLICY

The statement of policy issued by the National Wool Marketing Corporation referring to the wool situation and the merchandising of the wools held under the cooperative plan was construed favorably as indicating the presence in the wool market of a strong stabilizing organization. Draper & Co., Inc., selling agents for the pool, stated that the marketing corporation held at this time from ⅓ to ½ of the unsold domestic clip, that it would be their policy to maintain prices on present levels, advance prices whenever conditions warranted and in general maintain a greater stabilization of values, express their belief that such a policy would work to the advantage all from the wool growers to the consumers of wool. Summarizing wool conditions at this time it was pointed out that wools have declined 50% in the past two and a half years and that foreign markets must show further decline of 15 to 35%, according to grade to reach importing parity.

The cut in fabric prices at the recent American Woolen opening had a rather disturbing effect on the clothing industry which has still to deliver a considerable quantity of clothing on old contracts, but from the standpoint of the raw wool trade the situation as developed does little else than reflect water already run over the dam.

REWORKS AND RAGS

The recovered wool market is anticipating the time when mills will begin to take on additional supplies of ma-

terials to be utilized in their Fall manufactures. Prices on the various carbonized and carded materials are believed to be on an attractive competitive basis as compared with certain types of mill wastes.

Some gain in confidence is seen in the old wool rags and this ought to continue. There is no fundamental reason for a pessimistic outlook on the old rag market. The high tariff on rags has given a very large measure of protection to the domestic rag grader and the shutting out of imports will undoubtedly cause a vacuum in the general supply of these commodities which will have to be filled by domestic graders when the time comes. There have been no developments in the graded rag situation to date to warrant the recent advance in mixed rags, but the market is getting more of a forward look and this is the explanation of its willingness to speculate on its future prospects. In the meanwhile the price situation is very irregular and before the market can feel sure of itself there will have to be buying of both rags and clips on a much larger scale by the New England mills.

Noils and Mill Wastes

Purchasing of noils by manufacturers is in small lots and they have usually to pay the price asked by sellers. There are no large stocks of choice noils available, nor are the foreign markets considered in a favorable condition for import. Were the Boston market on a higher level, or the foreign markets on a lower level, there would be, in all probability, some buying of choice fine noils, the by-products of the combing of Cape and Australian wools. The consumption of Cape and Australian wools in the United States has been well below normal in the last twelve months. Recent Bradford comment is to the effect that the noil market in Boston remains steady and, although keeping in touch with Bradford quotations, there is no sign of any buying movement. The Continental markets are receding from their recent high position owing to slackening demand, especially on the choice qualities suitable for hat felt manufacture.

Mill waste demand is very restricted and holdings can only be reduced at price concessions. In wastes other than wools a similar situation prevails. Owing to unsatisfactory mill call, rayon wastes are quoted at low prices, the open bleached about 18c., with noils and other qualities in the buyer's favor. There will have to be a considerable increase in mill consumption before these materials can show any betterment, especially now that the rayon-producing companies have cut yarn prices all along the line.

Set-Back for Raw Silk

New Weakness Reduces Gains of Early July

WEAKNESS during the past week has materially reduced the gains registered in the raw silk market during the first part of July. Prices are still ahead, however, and the trade is hopeful that the recession may prove only temporary. Manufacturers buy hesitantly and in small quantities. They are waiting for the consumption figures for July, which will have a decided bearing on demand. A good consumption total would bring the normal increase in buying and would help prices.

Prices have dropped approximately 10c., but the fluctuation which caused the decline may be accepted as normal. Importers do not look for a steady rise, and they will be satisfied if the month's average shows moderate progress. The tone of the broadsilk trade is not too confident, though there is improvement over last week. Buying of broadsilks has picked up, and some mills are decidedly active. Production has registered a slight increase, which should have a favorable effect on raw silk demand within the next ten days.

Hosiery Knitters Buying

Raw silk importers are receiving inquiries from hosiery manufacturers on future prospects, and some advance business has been placed. One importer told of writing an order for deliveries up to June, 1931. This cannot be regarded as of any real significance, however, since it is really speculative coverage. Actually, the consuming industries are thumbs down on future commitments, and they probably will keep up this policy until they are convinced that there is no likelihood of silk taking another plunge.

Yokohama reports a scarcity of several high-grade numbers, especially in the 13/15s; this scarcity has not affected the more popular grades, but it is pronounced enough to strengthen the prices of high quality numbers, making the difference between these and the medium grades greater than usual.

◆Request Deferred Sweater Shipment

THE improvement last week in heavyweight sweaters has proved short-lived, and some jobbers and retailers now are notifying their sources of supply to postpone shipment of stocks on order. Mill agents continue hopeful, however, and the prospects for August are considered good. All heavyweight sweater sales are behind this time last year, but the difference is not great; agents stated this week that a spirited demand during the next four weeks would bring sales up to the 1929 figures. Current heavyweight buying is pretty well divided; there is especial interest in the part-wool and part-cotton coats that sell at $10.50. Crickets also have picked up.

Reports conflict as to the stock situation in the stores and jobbing-houses. There has been a carry-over of some sweater merchandise, but mill agents do not believe these stocks are large. They claim buyers are exaggerating the size of their carry-overs as an excuse for not buying. The fact is that the buying group is still very hesitant regarding fall prospects.

Bathing-suit producers are deep in plans for 1931 openings. Several representatives expect to open about Aug. 15, and indications are that the latter half of August will see numerous showings. The larger mills favor later openings, however, and some may not make their lines public until after Labor Day.

◆Winter Underwear Is Selling

KNITTED underwear is moderately steady. Heavyweights have improved, there is a pick-up in fall coverage, and the prospects of any general reduction in price before the end of the year are less. Representatives of the larger heavyweight mills insist that they are in a strong position, despite the late start in buying. August orders on heavies are expected to be active, but there is little chance that enough business will come in to bring sales to anything approaching last year's total. Even the well-entrenched volume-producing companies are far behind in sales, and they are reconciled to regard 1930 as an off-year.

Curtailment of output has done much to improve the position of these producers. Current reports are that both jobbers and retailers have no heavyweights on hand, and they will be forced to buy on a good scale soon. There is some spot business now being placed, but the bulk of buying is for late August and early September delivery. One firm estimates that it will be shipping 67 carloads a day about the middle of this month.

The heat spell of the past ten days had an adverse effect on all underwear trading, though there was no real slump. This is normally a quiet period, and the producers look for August to mark a turn for the better. Balbriggans are light but steady. Nainsooks are quiet.

The recent cut in rayon underwear prices has created a mild uncertainty among jobbers and retailers, but there is still a considerable amount of business being placed.

Better Tone in Hosiery

Price Insistence Less, Mill Agents Report

THE tone of the full-fashioned hosiery market has improved, and there is a significant lessening of insistence upon price. Mill agents say that, while business is still behind, both jobbers and retailers have a more confident attitude. They are buying somewhat in the old manner, stressing quality and design, and are not so determined upon buying by price. The distributors appear to be really short of stocks, and they feel the need of supplies for the pressure that usually comes about the middle of August. All orders are for summer shades, as the buyers are interested only in spot business, and they want to make sure they do not have any carry-overs after Labor Day. The stockings made to retail at $1.00 are an outstanding line in current demand. The mill representatives say this line is not affected by the gradual decline in the prices of the crepe and grenadine twist hosiery, which now hovers about $1.50 per pair retail.

Still Some Underselling

Just how trustworthy and substantial this new attitude of the buyers may prove to be is problematical. There are numerous mill agents who continue to complain of sharp underselling, and who say they cannot sell any adequate quantities without quoting prices which eliminate their profits. The trade as a whole is hesitant to wax enthusiastic about the outlook, as the experience of the past half-year have made everyone cautious. The prevailing low prices present a serious problem. One sales executive estimated that he would have to sell 10% additional volume to bring his financial returns up to the average of what they were before prices started their big decline.

Half-hose is spotty, some mills reporting considerable improvement while others have difficulty in getting stocks moved at reasonable figures. Current interest tends to emphasize the more conservative fancies. Clocks are in good demand, as are certain of the spirals.

◆Cotton Decline Dulls Goods Market

WITH raw cotton touching new lows for the year, cotton goods trading turned considerably quieter towards the close of last week. This period of the year is usually the most critical for the cotton crop, and the market may expect scares from day to day.

The declines in raw material caused hesitancy among goods buyers who had begun to show signs of increased interest. By the early part of the current week, gray-goods prices were showing some signs of easiness. This was particularly noticeable in certain print-cloth constructions where recent advances were rather rapid.

Print Cloth

Print-cloth weakness was not widespread—in fact several centers continued to quoted 5½c. for 64x60s 5.35 yd. It was reported that bids calling for deliveries of this number to the end of the year were turned down at this price. Spot and nearby deliveries of this construction were available at 5⅜c. in many centers, but actual orders were scarce.

Although at times there seemed to be a quickened demand for colored goods, this branch of the market continues to be spotty with no sustained buying. Denims took on some life immediately after new prices were made, but sales since have quieted down. Certain centers are inclined to believe that the market would have been just as well off if prices had been kept up a bit higher. It is their contention that just as much goods would have been sold at 13c. as have been sold at 12½c., with a consequent "better break" for the mills.

◆Wool Goods Seasonally Quiet

A SEASONAL quiet in wool goods has kept actual business at a minimum. The market continues to speculate about the recent price cuts attending the openings of the American Woolen Co. Certain selling agents stated that in their opinion the cuts were not as drastic as appeared on the surface. The readjustment was sharp, but necessarily so, as the big company did not price their goods low enough for fall 1930. It is believed almost universally that these new levels mark the low point of fabric quotations for the coming season.

Sellers were unwilling to predict what fancy suiting prices would be for the spring season. Openings are expected soon after Labor Day, but this is too far away to gage sentiment. Mill men point out that wool prices are about 5% above the low of the year, but also admit that manufacturing and raw material costs unfortunately have little effect on fabric quotations. Competitive conditions, being what they are, will determine cloth prices regardless of the economics involved.

Additional lines of tropicals were opened during the last few days, all centers being guided by the American lists. There are still certain important lines which have not been formally announced. There was no pronounced disposition to buy summer lines, judging from the talk around the selling houses.

Good Call for Broadsilks

Buyers More Confident And Market Tone Improves

THE end of July has brought a strengthening of demand for broadsilks, both from cutters and retailers, and the bustle of activity in the sales rooms of the silk companies this week was reminiscent of the busy spring days. There appears to be plenty of business available; good-sized orders are being placed, both spot and future, and the consuming markets are gradually becoming more confident regarding their fall coverage. Cantons and velvets are the principal fabrics moving at present. Canton plains, particularly browns, greens, wine shades, and blues, are in active demand; one sales manager said orders were rapidly approaching production figures, and he thought that if cantons kept moving at their present rate for four weeks, there would be shortage on the popular numbers.

Velvets in Big Call

Cutters are buying transparent velvets in substantial quantities, mostly for spot shipment. The early predictions of a velvet shortage have been fulfilled—at least to a moderate extent. It was reported that six leading velvet producers now are oversold, and deliveries are behind. Cutters are confident of an important winter for velvet, and have lost the hesitancy with which they regarded the pile fabrics after the slump last fall.

Sheers, Metals, Satins

The new confidence of the buyers has had a favorable effect on the movement of a wide range of fabrics. Georgettes are moving well. Metallic fabrics are still early, but orders have picked up. Satin-faced crepes and other satins are being sought, mostly in high colors, and the trade sees an active winter.

Increased demand has encouraged mills to increased output, and all the chief winter fabrics now are being produced on a substantial scale. Some cantons are being shipped, but most of the output is being held, pending the start of big-scale delivery about the midd'e of the month.

QUOTATIONS

at close of business, July 30, 1930
Prices cover average qualities unless otherwise stated

Cotton Goods

	July 30	July 23	July 31 1929
PRINT CLOTHS			
27 -in., 64x60, 7.60	4¼–4½c.	4½c.	5½c.
38½-in., 64x60, 5.35	5⅜–5½c.	5½c.	7½–7½c.
39 -in., 68x72, 4.75	6½–6½c.	6½–6⅝c.	8½c.
39 -in., 72x76, 4.25	7¼–7½c.	7½c.	9½–9¾c.
39 -in., 80x80- 4.00	7⅝–7¾c.	7¾c.	10½c.
BROWN SHEETING			
36-in., 56x60, 4.00	6¾–7 c.	7 c.	8½c.
36-in., 48x48, 3.00	8 –8¼c.	8–8⅛c.	10½–10⅝c.
37-in., 48x48, 4.00	6¼–6½c.	6½c.	7⅞c.
PAJAMA CHECKS			
36½-in., 72x80, 4.70	6¼–6½c.	6¼–6½c.	8⅞c.
36½-in., 64x60, 5.75	5½c.	5½c.	7½–7½c.
MISCELLANEOUS			
Drills, 37-in., 3 yd	8½c.	8½c.	10½c.
Denims, 2.20	12½c.	12½c.	17c.
Tickings, 8 oz	17½–17½c.	17½–17½c.	22–23½c.
Standard prints	8 c.	8 c.	9 c.
Eastern staple ginghams, 27-in	10c.	10c.	10½c.

Cotton Waste

Peeler comber	10½—11
Peeler strips	9½—10
Sak. comber	10 —10½
Choice willowed fly	5 — 6
Choice willowed picker	4 — 5
Sak. strips	12 — 13
Linters (mill run)	3 — 3½
White spooler (single)	8 — 8½

Cotton Yarn

(Carded yarn quotations are nominal)

CARDED (Average Quality)

Double Carded 2c.–4c. higher, according to quality

SINGLE SKEINS OR TUBES (Warp Twist)

4s to 8s	$0.21½–.22	20s	$0.24
10s	.22 –.22½	24s	–.26½
12s	.22½–.23	26s	–.27½
14s	.23 –.23½	30s	.29 –.29½
16s	.23½–.24	40s ex. qual.	.41 –.42

TWO-PLY SKEINS AND TUBES

8s-2	$0.22 –.22½	26s-2	$0.27½–.28
10s-2	.22½–.23	30s-2	–.29½
12s-2	.23 –.23½	36s-2	.35 –.36
14s-2	.23½–.24	40s-2	.37 –.38
16s-2	–.24	40s-2 hi blk	.41 –.42
20s-2	–.24½	50s-2	.46 –.47
24s-2	.26½–.27	60s-2	.54 –.55

SINGLE WARP

10s	$0.22 –.22½	24s	$0.26 –.26½
12s	.22½–.23	26s	.27 –.27½
14s	.23 –.23½	30s	.29½–.30
16s	–.23½	40s ex. qual.	–.42
20s	–.24		

TWO-PLY WARPS

8s-2	$0.22½	24s-2	$0.27
10s-2	.22½–.23	26s-2	–.28
12s-2	–.23½	30s-2	.29½–.30
14s-2	–.24	40s-2 ordin.	.37 –.38
16s-2	–.24½	50s-2	–.47
20s-2	.24½–.25	60s-2	–.55

8s-3 and 4-ply skeins and tubes; tinged, 19-20; white, 22-23; waste 18-18½

HOSIERY CONES (Frame Spun)

8s	$0.22½	22s	$0.26½
10s	–.23	24s	–.27½
12s	–.23½	26s	–.28½
14s	–.24	30s tying	–.30
16s	–.24½	30s reg	–.31½
18s	–.25	30s ex. qual.	–.34
20s	–.25½	40s	.38 –.39

COMBED PEELER—(Average Quality)

TWO-PLY—(Knitting Twist) Cones

20s-2	$0.40 –.41	60s-2	$0.59 – .60
30s-2	.44 –.45	70s-2	.69 – .70
36s-2	.45 –.46	80s-2	– .81
40s-2	.46 –.47	90s-2	.95 –1.00
50s-2	.52 –.53	100s-2	1.18 –1.20

WARPS, SKEINS AND CONES

TWO-PLY—(Warp Twist)

20s-2	$0.41 –.42	60s-2	$0.60 – .61
30s-2	.45 –.46	70s-2	.70 – .71
36s-2	.46 –.47	80s-2	– .82
40s-2	.47 –.48	90s-2	1.00 –1.05
50s-2	.53 –.54	100s-2	1.20 –1.25

SINGLES

12s	$0.34	30s	$0.43½–.44
14s	–.34½	38s	.46 –.46½
16s	–.35	40s	.47½–.48
18s	–.35½	50s	–.52
20s	–.36½	60s	.59 –.60
24s	–.39	70s	.69 –.70
28s	–.42	80s	.80 –.81

MERCERIZED CONES—(Combed, Ungassed)

26s-2	$0.55 –.56	90s-2	$1.35 –1.37
30s-2	.57 –.58	100s-2	1.65 –1.67
36s-2	.60 –.61	120s-2	2.05 –2.08
40s-2	.63 –.64	30s	– .75
45s-2	.65 –.67	40s	– .80
50s-2	.67 –.69	50s	– .85
60s-2	.76 –.78	60s	– .90
70s-2	.88 –.90	70s	–1.05
80s-2	1.00 –1.05	80s	–1.25

Cotton Prices and Statistics

COTTON STATISTICAL DATA

(Fluctuations of Futures)

	Closed July 24	For Week High	For Week Low	Closed July 30	Net Change
July	12.46	12.65	12.32	.....	.....
August	12.55	12.85	12.39	12.39	—.16
September	12.65	12.95	12.43	12.43	—.22
October	12.75	13.19	12.54	12.57	—.18
November	12.86	13.11	12.68	12.68	—.18
December	12.92	13.37	12.76	12.80	—.12
January	13.00	13.40	12.82	12.85	—.15
February	12.86	13.10	12.72	12.72	—.14
March	12.99	13.38	12.80	12.82	—.17
April	13.06	13.27	12.90	12.90	—.16
May	13.16	13.53	12.97	12.99	—.17

SPOT FLUCTUATIONS FOR WEEK

(Middling)

	New York	New Orleans	Liverpool
Friday, July 25	12.75	12.49	7.47
Saturday, July 26	12.95	12.68	7.55
Monday, July 28	12.75	12.50	7.63
Tuesday, July 29	12.65	12.50	7.48
Wednesday, July 30	12.45	12.30	7.45
Thursday, July 31	12.55	12.18	7.27

SPOT FLUCTUATIONS AND STOCKS

Markets	July 23	July 30	Sales	Stocks This Week	Stocks Last Year
Galveston	12.60	12.15	680	187,084	75,595
New Orleans	12.69	12.30	931	330,255	46,482
Mobile	12.25	12.00	10	10,509	10,858
Savannah	12.09	11.69	600	106,130	21,119
Norfolk	12.88	12.56	561	49,200	27,100
New York	12.90	12.45	200	240,464	141,154
Augusta	12.50	12.13	712	67,897	31,870
Memphis	12.00	11.60	2,082	149,886	48,633
St. Louis	12.25	11.75	.....	7,520	9,129
Houston	12.45	12.10	3,421	532,497	152,044
Dallas	12.15	11.60	3,271	10,712	2,393

BASIS MIDDLING

	Saturday, July 26	Saturday, July 19
10 markets average	12.30	12.85
Memphis	12.00	12.55

PREMIUM STAPLES

First Sales from Factors Tables at Memphis

Grade Strict Middling	Prices Nominal
1⅛-in	14.75– 15.00c.
1 3/16-in	16.00– 16.25c.
1¼-in	21.00– 21.25c.

CURRENT SALES

	For Week	Prev. Week	Week Before
Memphis total	2,903	2,806	3,144
F.o.b. included in total	2,653	2,347	2,864
10 markets	11,030	10,781	6,268

MEMPHIS RECEIPTS, SHIPMENTS, ETC.

	For Week	Last Year	Year Before
Net receipts	947	576	1,294
Gross receipts	4,567	5,149	7,638
Total since Aug. 1, net	944,364	863,184	669,302
Shipments	10,413	9,125	13,472
Total since Aug. 1	1,883,568	1,846,077	1,501,499
Total stock	153,672	52,889	83,949
Decrease for week	5,935	3,976	5,836
Unsold stock in hands of Memphis factors	28,393	4,793	.....
Increase for week	843	*58	.....

*Decrease.

AVERAGE PRICE JULY-AUG. SHIPMENT HARD WESTERN COTTON

F. o. b. New England

	Middling	St. Middling
1 1/32 in	15½–15¾c.	16 –16¼c.
1 1/16 in	16 –16¼c.	16¼–17 c.
1 3/32 in	17¼–18¼c.	19 –19¼c.
1⅛ in	22½–23½c.	24 –25 c.

Basis on New York, New December, 13.00.

DIFFERENCES ON AND OFF MIDDLING

WHITE GRADES

	Dallas	Memphis	Montgomery	Augusta	Average
M. F	1.05†	1.00†	1.00†	1.00†	1.00†
S. G. M	.90†	.85†	.90†	.88†	.86†
G. M	.75†	.75†	.75†	.75†	.72†
S. M	.50†	.50†	.50†	.50†	.50†
S. L. M	.75*	.65*	.65*	.75*	.71*
L. M	1.75*	1.75*	1.50*	2.00*	1.73*
S. G. O.**	3.00*	2.75*	2.50*	3.25*	2.88*
G. O	3.00*	2.75*	2.50*	3.25*	3.93*

YELLOW TINGED

G. M	.50*	.25*	.50*	.50*	.55*
S. M	1.00*	.75*	1.00*	1.00*	1.05*
M.**	1.75*	1.25*	1.50*	1.50*	1.65*
S. L. M	2.50*	1.75*	2.25*	2.25*	2.32*
L. M.**	3.50*	2.25*	3.00*	3.00*	3.22*

YELLOW STAINED

G. M	1.50*	1.75*	1.50*	1.50*	1.55*
S. M.**	2.25*	2.50*	2.50*	2.50*	2.40*
M.**	3.00*	3.00*	3.50*	3.50*	3.20

BLUE STAINED

M. G.**	1.75*	1.50*	1.75*	1.75*	1.70*
S. M.**	2.25*	2.25*	2.75*	2.75*	2.45*
M.**	3.00*	2.75*	3.75*	3.75*	3.23*

**Grades not deliverable on contract. †On Middling
*Off Middling.

EGYPTIAN COTTON

Alexandria Exchange, July 30		Change
November Sak	23.27	—4.83
October uppers	15.08	—0.92

JULY-AUGUST SHIPMENT c. i. f. BOSTON

(Tariff not included)	(Prices Nominal)
Fully good fair Sak	30.50
Fully good fair to good Uppers	18.50

(By Anderson, Clayton & Co.)

Wool

OHIO, PENNSYLVANIA AND WEST VIRGINIA
(IN GREASE)

Fine delne..	$0.30 –$0.31	¾ blood.....	$0.29 –$0.30
Fine clthg..	.23 – .24	½ blood.....	.30 – .31
¼ blood.....	.29 – .30		

TEXAS AND CALIFORNIA
(CLEAN BASIS)

Texas, 12 months	$0.73 –$0.75
California, Northern	.65 – .68

PULLED—EASTERN (CLEAN BASIS)

AA.....	$0.77 –$0.80	B-Super...	$0.58 –$0.62
A-Super....	.65 – .68	C-Super...	.55 – .58

MONTANA, IDAHO AND WYOMING
(CLEAN BASIS)

Staple fine	$0.75 –$0.78
Staple ¾ bld.	.70 – .73
Fine and fine medium	.70 – .72
¾ blood	.60 – .63
½ blood	.57 – .60

MOHAIR—DOMESTIC

Best Carding	$0.38 –$0.40
Best combing	.53 – .55

MOHAIR FOREIGN (IN BOND)

Turkey fair, average	$0.28 –$0.30
Cape firsts	.28 – .30

FOREIGN CLOTHING AND COMBING
(CLEAN BASIS IN BOND)

Australia:	
70s	$0.65 –$0.70
64s	.53 – .55
58s-60s	.46 – .48

(IN GREASE)

Montevideo:	
58-60s	$0.25 –$0.26
56s	.25 – .26
50s	.23 – .24
Buenos Aires:	
4s, 40-44s	$0.22 –$0.23
5s, 36-40s	.20 – .21

FOREIGN CARPET (GREASE BASIS IN BOND)
SCOURED

Aleppo	$0.30 –$0.31
China: Combing No. 1	.16 – .17
China Filling Fleece	.14 – .15
Szechuen ass't	.15
Cordova	.15 – .16
Scotch black face	.20 – .21
East India: Kandahar	.23 – .24
Vican'r	.27 – .29
Joria	.27 – .29

Worsted Yarns

ENGLISH SYSTEM WEAVING

2-20s, 36s	$0.92½–$0.95
2-24s, 40s	1.02½– 1.05
2-26s, 44s	1.10 – 1.12½
2-28s, 46s	1.15 – 1.17½
2-30s, 48s	1.20 – 1.22½
2-32s, 50s	1.25 – 1.27½

(Single yarns 5c. less than above)

2-36s, 58s	$1.35 –$1.40
2-40s, 60s	1.45 – 1.47½
2-40s, 64s	1.50 – 1.52½
2-50s, 66s	1.70 – 1.75
2-60s, 70s	2.15 – 2.20

ENGLISH SYSTEM KNITTING

2-20s, 44s in oil	$0.95
2-20s, 48s in oil	1.05
2-20s, 50s in oil	$1.07½– 1.10
2-20s, 56s in oil	1.15 – 1.20
2-20s, 60s in oil	1.32½– 1.35
2-20s, 64s in oil	1.40 1.42½
1-15s, 46s dyed	1.15 – 1.17½
1-15s, 48s dyed	1.17½– 1.20
1-15s, 50s dyed	1.22½

(Oil yarns 17½c. less)

FRENCH SYSTEM

1-20s, 58s	$1.20 –$1.22½
1-20s, 60s	1.25 – 1.27½
1-18s, 64s, Dyed	1.52½– 1.55
1-26s, 64s	1.27½– 1.30
1-30s, 60s, Warp	1.42½– 1.45
1-30s, 64s, Warp	1.47½– 1.52½
2-30s, 64s, Fancy mixes	1.70 – 1.72½
2-40s, 64s, Zephyrs	1.62½– 1.65
1-50s, 66s	1.62½– 1.65
2-50s, 66s	1.80 – 1.82½
1-60s, 70s	1.95 – 2.00
2-60s, 70s	2.10 – 2.15

FRENCH SPUN MERINO WHITE

1-30s, 50-50-58s on cops	$1.05 –$1.07½
1-40s, 50-50-60s on cops	1.20 – 1.25
1-40s, 50-50-64s on cops	1.22½– 1.25
1-40s, 50-50-64s Australian cops	1.30 – 1.35

Underwear mixes, 3c. additional.
Solid color, 35c. additional.

Tops and Noils

TOPS—BOSTON

Fine (64-66s)	$0.95 –$0.97
Half-blood (60-62s)	.88 – .90
High ¾ blood (58s)	.83 – .85
Aver. ¾ blood (56s)	.80 – .83
Low ¾ blood	.73 – .78
High ½ blood (50s)	.70 – .72
46s S. A. and N. Z.	.65 – .66
44s S. A and N. Z.	.62 – .65
40s S. A and N. Z.	.58 – .60

TOPS—BRADFORD, ENG. (JULY 24)

Fine (70s)	31 d	¾ bld. (56s)	20d
Fine (64s)	28 d	½ bld. (50s)	17d
¾ bld. (60s)	26 d	Cross-bred (46s)	15d
½ bld. low (58s)	22½d		

NOILS—BOSTON

Fine	$0.57–$0.60	High ½ bld..	$0.44–$0.47
Half-bld....	.53– .55	Low noils...	.40– .42
Aver. ¾ bld..	.45– .48	Medium colored...	.40– .42
Fine colored	.46– .48		

Wool Substitutes

WOOL WASTE

Lap, fine white	$0.80 –$0.83
Lap, fine colored	.58 – .60
Hard ends, fine white	60 – .63
Hard ends, ½ blood white	.40 – .43
Hard ends, fine colored	.28 – .30
Hard ends, medium colored	.23 – .25
Card, fine White	.30 – .33
Burr, fine Carbonising	.38 – .40

OLD WOOLEN RAGS (GRADED FOR MFRS.)

Merinos, Coarse Light	$0.06 –$0.07
Merinos, Fine Dark	.04½– .05
Merinos, Fine Light	.14 – .14½
Serges, Blue	.07½– .08
Serges, Black	.07 – .08
Serges, Red	.11 – .11½
Knit, White	.29 – .30
Knit, Red	.15 – .16
Knit, Light Hoods	.14 – .15
Worsted, Light	.05½– .06
Worsted, Blue	.07½– .08
Worsted, Black	.07½– .08

Silk Yarns

THROWN SILK (60 day basis)

	Nominal
Japan organzine, 2 thd. grand XX in skeins	$4.40
Japan organzine, 2 thd. sp. crack in skeins	4.25
Japan crepe, 3 thd. grand XX in bobbins	4.60
Japan crepe, 3 thd. sp. crack on bobbins	4.30
Japan crepe, 4 thd. crack on bobbins	4.05
Canton crepe, 3 & 4 thd. ns. 14/16 on bobbins	2.70
Tussah tram, 2 end on cops	2.00
Hosiery tram, 3 thd. Japan XXX	4.95
Hosiery tram, 4 thd. Japan, selec. gd. XX	4.45
Hosiery tram, sp. crack XX	3.70
Hosiery tram, crack XX	3.60
Hosiery tram, XX	3.35

SPUN SILK YARNS—(Terms: net 30)

40/2	$3.65	60/2	$4.00
50/2	3.85	62/1	2.80

Raw Silk

(60 day basis)
Prices Nominal

Japan filature, grand XX, 13/15	$3.50
Japan filature, sp. crack XX, 13/15	3.30
Japan filature, crack XX, 13/15	3.15
Japan filature, XX, 13/15	2.95
Japan filature, best X, 13/15	2.90
Canton filature, new style, 14/16	1.90
Canton filature, new style, 20/22	1.85
Tussah filature, 8 cocoon	1.55
Grand XX (Yellow) 20/22	2.90
Grand XX (White) 20/22	2.95
Sp. crack (Yellow) 20/22	2.85
Sp. crack (White) 20/22	2.90
Crack (Yellow) 20/22	2.80
Crack (White) 20/22	2.85

NATIONAL RAW SILK EXCHANGE

	Close July 23	For the Week High	For the Week Low	Close July 29	Net Chge.
July	2.90	2.90	2.75	....	.....
August	2.84	2.84	2.72	2.74	—.10
September	2.85	2.85	2.71	2.71	—.14
October	2.85	2.88	2.70	2.71	—.14
November	2.85	2.85	2.70	2.71	—.14
December	2.85	2.85	2.70	2.71	—.14
January	2.86	2.87	2.70	2.71	—.15
February	2.85	2.86	2.71	2.71	—.14
March	....	2.77	2.71	2.71	.....

July 23 to July 29—Total contracts, 507. Total number of bales, 5,070. Total approximate value $1,809,990.

Domestic Rayon

VISCOSE PROCESS

Denier	Filament	First	Second
50	14	$2.15	$1.95
75	18	1.60	1.50
75	30	1.70	1.60
100	18	1.25	1.15
100	40	1.30	1.20
125	36	1.20	1.10
150	24	.95	.90
150	36	1.00	.95
150	60	1.15	1.10
150	75–90	1.20	1.15
170	24–27	.95	.90
170	60	1.15	1.10
200	30	.90	.85
200	35	.90	.85
200	75–80	1.10	1.05
300	44	.78	.75
450	54	.78	.75
600	72–96	.78	.75
900	100–144	.78	.75

NITRO-CELLULOSE PROCESS

Denier	First Qual.	Second Qual.	Denier	First Qual.	Second Qual.
75	1.60	1.50	150	.95	.90
100	1.25	1.15	175	.95	.90
125	$1.20	$1.10			

CUPRAMMONIUM PROCESS

Denier	Filament	Price	Denier	Filament	Price
15	25	$4.15	40	30	$3.15
25	25	3.65	52	30	3.00
30	25	3.40			

(Due to diversified offerings prices for higher denier are not listed.)

ACETATE PROCESS

Denier	Price	Denier	Price
45	$2.75	120	$1.90
55	2.55	150	1.60–1.85
75	2.25–2.70	200	1.55
100	2.00–2.45	300	1.50

Rayon Waste

•Prices Nominal

Open bleached waste	–$0.18
Open unbleached waste	– .15
Bleached thread waste (mfs.)	– .12
Bleached thread waste (misc.)	.11– .12
Colored thread waste	.08– .10
Colored clips	– .07½

CONVERTED RAYON WASTE

Bleached tops	–$0.49
Unbleached tops	– .43
Bleached noils	– .18
Bleached garnets	– .18
Unbleached garnets	– .16
Colored garnets	– .14

Silk Waste

Kibizzo Kikai Grand XX	$0.85
Kibizzo Kikai Triple Extra	.92
Frison Grand Double	.90
Pierced Cocoons	1.12

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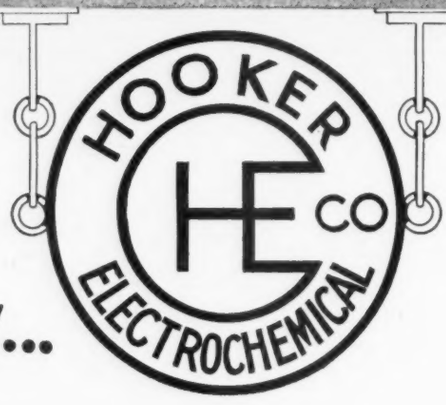
..of the Highest Quality...



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Caustic Soda
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Benzoate of Soda
Benzoic Acid
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Benzyl Alcohol
Benzyl Chloride
Antimony Trichloride
Ferric Chloride
Sulphur Monochloride
Sulphur Dichloride
Sulphuryl Chloride
Salt

HOOKER ELECTROCHEMICAL CO.

EASTERN
Plant -- Niagara Falls, N. Y.
Sales Office--60 East 42nd Street, New York

WESTERN
Plant --Tacoma, Washington
Sales Office --Tacoma, Washington

Southern Mill Securities

(A. M. Law & Co., Spartanburg)

	Bid	Asked
Abbeville Cotton Mills	..	60
Anderson Cotton Mills	69	73
Arcade Cotton Mills	..	60
Arcadia Mills	..	240
Arcadia Mills, pfd	96	100
Arkwright Mills	..	60
Augusta Factory, Ga	..	20
Avondale Mills, Ala	750	1000
Beaumont Mfg. Co	250	300
Beaumont Mfg. Co. 7% pfd	100	102
Belton Mills	..	25
Belton Mills, pfd	..	78
Bibb Mfg. Co	98	101
Bibb Mfg. Co. 6% pfd	99	102
Brandon Corp., A	..	45
Brandon Corp., B	..	7
Brandon Corp., pfd	80	85
Calhoun Mills	88	95
Chadwick-Hoskins Co. (par, $25)	9	12
Chesnee Mills	..	60
Chiquola Mfg. Co	250	260
Chiquola Mfg. Co., pfd	88	92
Clifton Mfg. Co	95	98
Clinton Cotton Mills	225	250
Columbus Mfg. Co., Ga	80	90
Cowpens Mills	..	30
D. E. Converse Co	90	95
Dallas Mfg. Co., Ala	..	65
Darlington Mfg. Co	40	50
Drayton Mills	110	..
Dunean Mills	120	125
Dunean Mills, pfd	100	102
Eagle & Phenix Mills, Ga	..	65
Easley Cotton Mills, pfd	..	47
Enterprise Mfg. Co., Ga	..	100
Fairforest Finishing Co., serial notes	98	100
Florence Mills	45	50
Florence Mills, pfd	98	102
Gaffney Mfg. Co	..	27
Gainesville Cotton Mills, Ga	145	155
Glenwood Mills	85	95
Gluck Mills	70	75
Gossett Mills	..	65
Graniteville Mfg. Co	..	100
Greenwood Cotton Mills	400	..
Grendel Mills, pfd. (par, $50)	45	48
Hamrick Mills	..	100
Hartsville Cotton Mills	130	140
Hunter Mfg. & Com. Co., pfd	85	88
Industrial Cotton Mills Co., pfd	..	30
Inman Mills	115	125
Inman Mills, pfd	100	..
Judson Mills, A, pfd	99	103
Judson Mills, B, pfd	95	98
King, John P. Mfg. Co., Ga	80	90
Lancaster Cotton Mills	250	270
Laurens Cotton Mills	..	120
Limestone Cotton Mills	..	100
Lydia Cotton Mills, serial notes	99	101
Marion Mfg. Co., N. C	..	113
Marlboro Mills	..	15
Mills Mill, pfd	95	99
Mollohon Mfg. Co., pfd	97	100
Monarch Mills	110	115
Musgrove Cotton Mills	30	35
Newberry Cotton Mills	100	105
Ninety-Six Mills	400	..
Norris Cotton Mills	..	45
Orr Cotton Mills	..	60
Orr Cotton Mills, pfd	..	83
Pacolet Mfg. Co	..	140
Pacolet Mfg. Co., pfd	97	100
Panola Cotton Mills, Class A, pfd. (par, $60)	57	60
Pickens Cotton Mills	105	115
Piedmont Mfg. Co	96	100
Piedmont Print Works (no par)	15	20
Piedmont Print Works, pfd	60	70
Poe, F. W. Mfg. Co	24	29
Riverside & Dan River Mills	9½	11
Riverside & Dan River Mills, 6% pfd	73	78
Saxon Mills	..	70
Sibley Mfg. Co., Ga	50	60
Southern Bleachery	16	20
Southern Bleachery, Pfd	80	85
Southern Bleachery, serial notes	95	100
Southern Franklin Process	19	22
Southern Franklin Process, pfd	98	101
Southern Worsted Corp., pfd	88	92
Spartan Mills	..	145
Spencer Corp., serial notes	98	100
Union-Buffalo Mills	..	46
Union-Buffalo Mills, 1st pfd	87	90
Union-Buffalo Mills, 2nd pfd	43	45
Victor-Monaghan Co	68	70
Victor-Monaghan Co., pfd	112	117
Wallace Mfg. Co	..	105
Ware Shoals Mfg. Co	130	140
Whitney Mfg. Co	..	40
Woodside Cotton Mills Co	..	40
Woodside Cotton Mills Co., pfd	..	42
Yarns Corp. of America, gold bonds	99	101

Textiles on N. Y. Exchanges

The following shows the movements of the leading textile stocks listed on the New York Stock Exchange and Curb for the week ended July 30:

	High	Low	Last Sale	Net Change
Adams Millis	26	25½	26	—1
American Woolen	10¼	9½	9½	—1½
American Woolen, pfd	29	28	28	—1½
*Assoc. Rayon, pfd	48	45½	45½	—1½
Belding-Hemingway	4½	4½	4½	....
Cannon Mills	22¾	22½	22¾	+ ¼
Collins & Aikman	26	22½	24	+ ½
Consolidated Textile	1	⅞	⅞	— ⅛
*Fabrics Finishing	3¼	3⅛	3¼	+ ⅛
Gotham Hosiery	11	10½	10½	—1¼
Industrial Rayon	91	90¾	90¾	— ¼
Kayser, Julius	25⅜	24	25	+ ⅜
Kendall, pfd	81½	76	81½	+4½
Mallison	9⅛	8⅜	8⅜	—1⅛
*May Hosiery, pfd	24¼	22	24½	—3½
Mohawk Carpet	18½	18	18	— ½
Munsingwear	45	45	45	....
*Pepperell	84½	84½	84½	+4½
Real Silk Hosiery	46⅝	41¾	44	+2⅛
*Tubize Chat. B	8	7	7⅛	— ⅛
United Piece Dye Wks.	27⅜	25½	26	— ⅜

*Listed on curb.

Fall River Mill Stocks

(G. M. Haffards & Co., Fall River)

	Bid	Asked
Algonquin Printing Co	320	335
American Linen Co	..	..
Barnard Mfg. Co	..	10
Berkshire (com.)	..	14
Berkshire (pfd.)	..	65
Bourne Mills	..	10
Border City Mfg. Co	..	5
Charlton Mills	..	60
Cornell Mills	..	10
Davol Mills	..	5
Davis Mills	..	12
Flint Mills	18	..
King Philip Mills	..	..
Laurel Lake Mills (com.)	..	8
Lincoln Mfg. Co	..	12
Luther Mfg. Co	..	..
Merchants Mfg. Co	27	
Narragansett Mills	..	10
Parker Mills, com	..	..
Pilgrim Mills	..	65
Richard Borden Mfg. Co	2	4
Sagamore Mfg. Co	..	60
Shove Mills	4	8
Stafford Mills	..	1
Stevens Mfg. Co	..	35
Union Cotton Mfg. Co	24	..
Wampanoag Mills	..	..
Weetamoe Mills	..	1

N. Carolina Mill Stocks

(R. S. Dickson & Co., Charlotte, N. C.)

	Bid	Ask
Acme Spinning Co	64	75
American Yarn and Processing Co	..	72
Chadwick-Hoskins Co. (Par. $25)	8	11
Chadwick-Hoskins Co., 8%, Pfd	97	100
China Grove Cotton Mills	97	101
Climax Spinning Co	60	68
Clover Mills	..	25
Converse D. E. Co	88	95
Crescent Spinning Co	54	62
Dixon Mills	90	100
Durham Hosiery, 6%, Pfd	35	39
Eagle Yarn Mills	58	65
Efird Mfg. Co	70	81
Erwin Cotton Mills	..	120
Erwin Cotton Mills Co., 6%, Pfd	90	97
Flint Mfg. Co	..	81
Flint Mfg. Co., 7%, Pfd	93	98
Globe Yarn Mills (N.C.)	..	20
Gray Mfg. Co	..	81
Hanes, P. H. Knitting Co	8	10½
Hanes, P. H. Knitting Co., 7%, Pfd.	96	101
Henrietta Mills, 7%, Pfd	43	55
Imperial Yarn Mills	..	60
Linford Mills	60	75
Locke Cotton Mills Co	45	55
Majestic Mfg. Co	100	135
Mansfield Mills	..	75
Mooresville Cotton Mills	4	7
Mooresville Cotton Mills, 7%, Prior Pfd	..	85
Myers Mills	..	72
Myrtle Mills	..	51
National Yarn Mill	50	60
Perfection Spinning Co	55	66
Ranlo Mfg. Co	..	115
Ranlo Mfg. Co., 7%, Pfd	..	98
Roanoke Mills	60	..
Roanoke Mills, 1st Pfd., 7½%	88	95
Roanoke Mills, 2nd Pfd., 8%	88	96
Rosemary Mfg. Co., Pfd., 7½%	97	..
Rowan Cotton Mills Co	68	80
Seminole Cotton Mills Co	..	75
Sterling Spinning Co	60	75
Stowe Spinning Co	59	66
Victory Yarn Mills Co	35	50
Ware Shoals Mfg. Co., 7%, Pfd	92	98
Winget Yarn Mills Co	38	50
Wiscassett Mills Co	155	180

New England Textile Stocks

Quotations at "Public Sale" are based on last sales at Boston Public Auctions and Boston Stock Exchange. Bid and Asked prices are latest quotations of leading Boston dealers.

	Public Sale	Bid	Asked
Am. Mfg. pfd	68	60	64
Amoskeag	12½	12	13
Arlington	23½	23	25
Associated Textile	36½	34	37
Bates	63	78	82
Berkshire Associates, com	12	12	14
Berkshire Associates, pfd	59	60	65
Bigelow-Sanford, com	61	55	58
Boott Mills	120½	110	115
Edwards	80¾	80	83
Esmond, pfd	102	100	102
Farr Alpaca	68	67	69
Hamilton Woolen	40	40	43
Hill	18	18	23
Indian Orchard	20½	20	25
Ludlow	138	136	140
Merrimack, com	50½	45	48
Nashua, com	32½	26	28
Nashua, pfd	77½	67	71
Naumkeag	88	83	86
Newmarket	25¾	20	25
Otis	49½	43	46
Pacific	23	22	24
Pepperell	85½	82	85
Plymouth Cordage	82	71	74
York	8¼	7	9

New Bedford Mill Stocks

(Sanford & Kelley, New Bedford)

	Bid	Asked
Acushnet Mill	14	15½
Beacon Mfg., con	125	..
Beacon Mfg., pfd	85	87
Booth Mfg. Co., com	9	11
Booth Mfg. Co., pfd	30	..
Bristol Mfg. Co	27	29
City Mfg. Co	38	42
Dartmouth Mfg. Co., com	50	52½
Dartmouth Mfg. Co., pfd	86	..
Fairhaven Mills, pfd	¼	¼
Gosnold Mill., com	..	19
Gosnold Mill, pfd	..	50
Grinnell Mfg. Co	22½	25
Hathaway Mfg. Co	38	39
Holmes Mfg. Co., com	1	3
Holmes Mfg. Co., pfd	10	..
Kilburn Mill	36	39
Nashawena Mills	20	22
N.B. Cotton Mills, pfd	10	12½
Neild Mill	33	36
Nonquitt Mills	4½	5½
Pierce Mill	117½	125
Potumska Mills	30	32
Quissett Mills, com	50	53
Soule Mill	52½	..
Taber Mill	9½	10¾
Wamsutta Mills	14	15½
Whitman Mills	1	2½
Gosnold Mill Notes	87	..
Whitman Mills 6% Notes	38	..

* Ex-dividend.

Textile Calendar

Chicago Yarn Men's Circle, Annual Golf Tournament, Nippersink Lodge, Genoa City, Wis., Aug. 28, 1930.

Worsted Yarn Spinners' Annual Outing, Manufacturers' Country Club, Oreland, Pa., Sept. 24, 1930.

National Safety Congress, Textile Section, Annual Meeting, William Penn Hotel, Pittsburgh, Pa., Sept. 30-Oct. 1, 1930.

National Association of Cotton Manufacturers, Annual Meeting, Poland Springe, Me., Oct. 10-11, 1930.

Ninth Southern Textile Exposition, Textile Hall, Greenville, S. C., Oct. 20-25, 1930.

Textile Division, A.S.M.E., National Meeting, Poinsett Hotel, Greenville, S. C., Oct. 22, 1930.

Southern Textile Association, Semi-Annual Meeting, Poinsett Hotel, Greenville, S. C., Oct. 23, 1930.

Statement from Rayon Ass'n

(Continued from page 41)

industry as an industry and protect customers and consumers regarding quality of yarns in every possible respect. As former members of the association, and now as non-members, they have, are and intend individually to pursue only such policies as are for the best interests of the entire rayon industry which may be consistent with the welfare of their separate companies and the protection of their own respective customers according to the dictates of their own separate individual judgment and not otherwise.

"Without qualification separately Mr. Yerkes and Mr. Salvage have made it clear at all times that they approve only those principles which tend to improve the rayon industry and insure high quality of yarns. They have no opinions regarding future association endeavors except being favorably disposed toward cooperating concerning common problems. They would lend support to measures which would elevate standards of producing and marketing rayon yarns in the interest of their individual customers and trade generally as they separately see it when without duplication of effort.

"If such support cannot in the future be rendered unless as members, either or both may of course at that time consider applying for membership.

"The association is continuing but will do less statistical work because without Viscose and Dupont, reports on statistics for industry will not be sufficiently complete."

Locating the Garage

(Continued from page 45)

problem is complicated. Six plants each operating with a small garage were merged. Shortly afterward, a large central garage was built, despite the fact that the trucks were divided into six fleets, each working from an individual plant. The most central mill was chosen and a modern garage built there. Absolutely thorough maintenance is the rule. The fan-shaped city lends itself to this plan. Aside from the distance from garage to plants and back, there is no overlapping or lost mileage. The new garage does any or all work easier, quicker, cheaper—enough so to offset its cost.

Spread-out cities, like Boston, Providence with Pawtucket and Central Falls, and Fall River, offer special problems. Sometimes they do not lend themselves well to the single central garage even for a big mill with branches. Another situation requiring close figuring is that in which the mill is in one small town and its dyehouse or bleachery in another some 30 to 50 miles away. The distance is great, a round trip is nearly a day's work. If the trucks are speeded up and an extra half-trip made, garage facilities are needed at each end. Will the savings effected by the extra loads offset the cost of this?

There is more to the mental attitude of management than appears. As distinguished from cheap, sloppy care, so long as trucks run, there is the attitude of getting the most out of the trucks at the earliest moment with minimum of work, and then turning in each truck in partial payment for a new one. There is a point in the life of a truck up to which no great amount of repairs and maintenance is needed; but beyond that point maintenance becomes more necessary and more expensive, repairs are more frequent, the whole upkeep cost is greatly increased. A company in Massachusetts that uses 24 small trucks finds this point to be just beyond two years. Therefore, one of the trucks is turned in on a new one each month, the entire fleet being replaced every two years, with their active life the same. New, bright trucks are working for this firm constantly. Two men take care of the whole fleet; no major repairs are necessary, not even carbon removal or valve grinding. Small parts are replaced and necessary adjustments made; no other work is needed.

Bodies are removed, repaired, repainted. The books are simplified; no depreciation is charged, since the cost of a new chassis minus the allowance for the old is equivalent to this. Drivers like the plan, many have been with the firm fifteen years. It cuts garage problems down to housing space, paint shop, and bench room for two men.

Basements are usually too damp, too dark, inaccessible. Upper floors are even less economical because of time lost with elevators. Ramps are better, but require a large plot of land or more floors. Sometimes the substation serves well, especially with large trucks hauling from the mill to the substation—usually at night—and small fast trucks working out from it. This is a problem by itself and depends largely on the nature and scope of the business. Garage location nowadays is no trifling matter to be tackled lightly, but in a big textile mill is a major economic problem if properly considered.

Textile Associates Club Elects Officers

At the annual meeting and outing of the Textile Associates Club, held at the Mayflower Hotel, Manomet Point, Mass., July 26-27, the following officers were elected for 1930-1931: president, Robert W. Boys, Farr Alpaca Co., Holyoke, Mass.; secretary-treasurer, John A. Fernley, Leader Weaving Co., Pawtucket, R. I.; auditor, Ernest Whitworth, Lorraine Mfg. Co., Pawtucket, R. I. The executive committee consists of the president, secretary, and Richard Boardman, Bristol Curtain Co., Swansea, Mass.

Richard Cowell, one of the charter members of the club, having permanently retired from the textile industry, was elected a life member. The club has had a limit of 25 members, but there have been so many requests for membership that it was decided to enlarge the membership to 30.

Pepperell Keeps Abreast of Machinery Modernization

(Continued from page 37)

ported to Lewiston. If necessary a special trip will be made if the expenditure contemplated is large.

A specific example of the methods pursued in keeping in touch with new developments is the purchase of a chainless mercerizing machine. Reports received indicated that the machine offered practical advantages. A trip was made by the manager, the machine seen in operation, the results in quality and savings checked, and, since the opinion was favorable, a contract was signed on the spot. Upon installation the new machine, in addition to being able to handle more delicate fabrics, proved to produce about three times as much as the old machine and the amount of caustic soda for a given production was cut in half.

There are many other instances where new machinery is placed in the plant on a replacement basis, but most of the new machinery installed is for the purpose of producing a new finish or radically improving the finish.

On the basis of straight replacement a machine must pay for itself in two years to justify installation, but in improving finish it sometimes works out that the new machinery is more expensive to operate than the old. Quality is such a vital factor, however, that the increased saleability of the product makes up for the increased production cost.

Style a Factor

Change in styles causes obsolescence in certain types of finishing machinery and for this reason when investigating a new machine care is used to determine the permanency of the products market and the versatility of the machine itself. The basic principles of most of the finishing machinery have not been changed for many years, but each year sees constant refinements made. This necessitates considerable modernization of equipment; the new features being usually of a type that they can be fitted to the old.

Range finishing has, of course, developed considerably during late years and has been used where advisable. It is a problem of balancing the advantages of group economy against the flexibility of single units.

Financial Aspect

In handling the financial aspect of depreciation no segregated actual fund is put aside. The usual rate of depreciation is figured in making out financial returns, but the actual expenditures for improvement have run far above the figured depreciation. New machinery, therefore, is handled more as an addition to plant than as a replacement.

Vigilance is extremely necessary to keep a finishing plant producing quality goods efficiently. Processes, methods and machinery must be revised constantly as knowledge increases.

John A. Spooner Succeeds C. C. Bassett at Viscose

Announcement is made by the Viscose Co. of the resignation of Chester C. Bassett, Jr., who has become well known in the rayon industry through his ten years' association with the Viscose Co., and through his activities as president of the Rayon Institute of America. Mr. Bassett has been succeeded by John A. Spooner who will serve as merchandising director in charge of sales promotion advertising and publicity.

Close application over a period of many months to the details of perfecting the Viscose Company's quality-control program taxed the health of Mr. Bassett. Commenting on his departure, Mr. Bassett states:

"It is with exceeding regret that I have resigned my connections with the Viscose Co. after approximately ten years of very enjoyable and interesting association with that company. My future plans are uncertain and will not be made for an indefinite period."

Mr. Spooner is a graduate of the Philadelphia Textile school. He became associated with his father, Alban Spooner, owner of what is now the Century Beverly Corp., Beverly, N. J., and after military service in France, he went with F. U. Stearns & Co., selling cotton goods. Later, as an account representative with one of the largest national advertising agencies, he acquired a thorough knowledge of merchandising, sales promotion, advertising, and publicity. His first duties in his new position include supervision of the quality-control plan.

Jas. E. Mitchell Co. Expands Sales Force

James E. Mitchell Co., Philadelphia, cotton and rayon yarns, has recently made several changes in its sales organization which are aimed to facilitate its service. Arthur Gagner has become associated with the company and will assist in covering the southern territory, making his headquarters in Greenville, S. C. Mr. Gagner resides in Satesville, N. C. Crosby L. Smith has been transferred to the New York and Ohio territories, John M. Richards continuing to cover the western trade with the exception of Ohio.

Phila. Knitcraft Guild Names Officers

Reorganization of the Philadelphia division of the National Knitted Outerwear Association, under the name of the Philadelphia Knitcraft Guild, has now been completed, and officers have been elected. The Guild, which will continue to operate as a unit of the National Association, is composed of ten mills. Officers are: A. Titleman, Arr-Tee Knitting Mills, president; Lloyd O. Lohmeyer, Thurman Mfg. Co., first vice-president; Bernard Steuer, Tartan Knitwear Mills, second vice-president; J. Sichel, Grushlaw & Sichel, treasurer. E. H. Cohen is secretary and counsel. Member mills aside from above are: Bergman Knitting Mills, Durable Knitting Mills, Franklin Sweater Mills, Novelty Knitting Mills, Sperior Knitting Mills and West Point Knitting Mills. The Guild is announced as "a group of leading manufacturers pledged to a definite code of standards and service."

Semi-Annual Index

The index to TEXTILE WORLD, Volume 77, covering the issues from Jan. 4 to June 28, 1930, inclusive, is now off the press and is available, without charge to readers on request. Address TEXTILE WORLD, Tenth Ave. at 36th St., New York.

British Rayon Notes

The directors of Courtaulds have announced that the interim dividend on the ordinary shares is to be 3%, payable Aug. 15, to shareholders registered on July 17. The distribution compares with 4% a year ago, but a reduction is in accordance with market expectations. The general conditions during the first half of the year have been far from favorable, and at the meeting in March the chairman said that the very serious loss of profits in the first four months of the current year was not likely to be recouped by any expansion in demand during the rest of the year.

Harbens, Ltd., the most successful of the smaller British rayon companies, made a profit of £56,113 during the year ended April 30, which compares with £57,064 in the previous year, and £66,428 in 1927-1928.

Last Week's Full-Fashioned Hosiery Article

Through error in "make-up," the positions of pages 38 and 39 in last week's issue of TEXTILE WORLD were transposed. This mistake disrupted the sequence of pages in the article "Operation of Jack and Dividing Sinkers in Full-Fashioned Hosiery Machines," by M. C. Miller. We hope that readers who were confused by the error will dig out their July 26 issue and reread these pages in proper order, as anything Mr. Miller writes is well worth such effort.

Rheinauer Broadcasts Talk on Knitting Industry

"The Story of the Knitting Needle" was the subject of a radio address, delivered by Daniel Rheinauer, president of the National Knitted Outerwear Association, over the Columbia Broadcasting chain, last Saturday. The talk was one of a series which is part of the association's promotion campaign, for the outerwear industry. Mr. Rheinauer described the evolution of knitting from its primitive start to present methods.

Cotton Exchange Changes Statistical Basis

Important and extensive changes in its system of weekly statistics, covering movement and stocks of American cotton, to go into effect with the opening of the new cotton season on Aug. 1, are announced by the New York Cotton Exchange. Weekly figures on movement into sight, visible supply, exports, and spinners' takings, will be published exclusive of linters, with the exception of detailed statistics on visible supply and exports, which will include linters as before. The definition of "visible supply" has been changed so that it will cover cotton afloat to and at ports of the Orient, while the term "forwardings to mills" will be substituted for "spinners' takings," and the definition covering that term revised so that it will indicate more specifically movement to or into mills.

These changes constitute the first revisions made in many years in the system of weekly statistics of American cotton, as followed by producers, merchants, and spinners in this country and abroad. The purpose of the exchange in effecting these revisions is to bring its weekly statistics more nearly in line with the present scope and organization of the world cotton industry, to simplify and clarify them, and make them more readily subject to correlation with other statistics on such subjects as ginnings, domestic and foreign consumption, and world carry-over.

Lewis Mfg. Extends Line of Dressings

Extension of its line of ready made dressings for hospitals is announced by Lewis Mfg. Co., division of The Kendall Co. The extension was prompted by the wide acceptance by hospitals of the ready made dressings idea, originated by the Lewis company several years ago. Former practice was for hospitals to prepare their own dressing from bolts of surgical gauze supplied by various cotton mills.

Research by the Lewis company indicated that hospitals could simplify their dressings technique and save time and money by purchasing many dressings already cut, folded, and ready for sterilization and use. Many of the new Lewis dressings, outlined in its "Ready Made Dressings Manual," just published, are in accordance, it is affirmed, with the list of dressings recommended by the American College of Surgeons.

A specialized advertising and selling effort is under way in behalf of the new line.

Knitters Favor Worsted Bathing-Suits for 1931

The worsted rib knit bathing-suit is the most practicable for swimming and will be a leading feature of the 1931 season, it was decided by bathing-suit manufacturers representing 50% of the industry's production, who met at the Hotel Pennsylvania, New York, Wed-

nesday. The meeting was presided over by Daniel Rheinauer, of the New York Knitting Mills and president of the National Knitted Outerwear Association, under the auspices of which body the meeting was held. The manufacturers favored a trade-up in manufacture and also a trend toward softer materials.

Burlap Demand Lessens as Prices Ease

Burlap markets at mid-week were quiet with prices slightly easier due to a reaction in Calcutta cables. Declines in future shipments amounted to as much as $2 a bale although the average was approximately $1. Previously, there had been signs of a growing interest in future shipment goods, but this dried up as prices became weaker.

The 8 oz. 40s for spot and two weeks arrival were 4.75c.; August shipment, 4.80c. The 10½ oz. for spot, two weeks arrival and August shipment were 6.15c.

Offers Centralized Bureau for Credit Data on Textile Buyers

Buyers of textile products will effect important savings in time and effort when meeting requests for financial statements through the new plan of centralizing the filing and distributing of the statements, which is the culmination of an idea long discussed by many prominent credit executives, including members of both the Uptown Credit Group of the Textile Industry, a division of the Silk Association of America, Inc., and the Downtown Textile Credit Group, Inc.

Substantially the entire membership of both the Downtown Credit Group and Uptown Credit Group have agreed that the proposed centralized plan is practical, particularly in the textile industry, and will result in considerable economy on the part of all concerned.

Under the centralized plan, the buyer will file at the central point one semi-annual financial statement. Textile houses to whom he applies for credit can secure a photostatic copy of the current statement by applying to the central point. The buyer will continue to furnish copies of his financial statement and other necessary financial data to those recognized mercantile agencies serving the textile trade and to those individual concerns who prefer, in specific instances, to obtain the information direct, but it is expected that most of the individual requests for statements will be made through the centralized office. The point of centralized distribution will be the National Credit Office, 2 Park Avenue, New York.

Mohawk Lays Out New Sales Districts

The Mohawk Carpet Mills' management has divided the United States into five sales districts. The following executives have been appointed district sales managers:

The first or Atlantic Division, 295 Fifth Avenue, New York, E. A. Haggenmuller.

The second or Southern Division, Public Ledger Bldg., Philadelphia, J. R. Blocher.

The third or Central Division, Lytton Bldg., Chicago, F. D. Monahan.

The fourth or Southwest Division, Paul Brown Bldg., St. Louis, L. E. Green.

The fifth or Pacific Coast Division, Furniture Exchange, San Francisco, G. H. Durston.

As an advance in cooperating with distributors and instituting a definite connecting link between the mill and the trade, J. D. I. Husband has been appointed merchandising manager, and Everett H. Toussaint becomes advertising and sales promotion manager. George P. Reynolds will continue as contract sales manager. Other executives who will contact with the trade include A. J. McGrath, sales service manager, Francis Way, stylist, and J. H. Murphy, credit manager.

Assisting A. W. Shuttleworth recently elected president of the corporation are the following department heads, Howard L. Shuttleworth, treasurer, S. M. Brown, comptroller, George Lambie, general sales manager, J. D. I. Husband, merchandising manager, and G. E. Schulz, production manager.

Business News

C. O. Streeter Joins Schwartz Belting Co.

Claude O. Streeter, for eighteen years chief mechanical engineer of the Graton & Knight Co. and its subsidiaries, has resigned to accept a similar post with the Schwartz Belting Co., of New York City, it is announced by D. D. Schwartz, treasurer of the latter company. Mr. Streeter will have charge of the Schwartz Belting Co.'s service in assisting clients in solving power transmission problems.

Rucker, Heinen & Thomas Move Offices

Rucker, Heinen & Thomas, Inc., announce the removal of their offices and warehouse on Aug. 1, to 196-198 21st Ave., Paterson, N. J. At that point they will carry a full line of dyewoods, dyestuffs, and tanning materials for immediate delivery.

Attends New York Sales Conference

Lewis W. Thomason, southern district manager for Non-Fluid Oil, recently made a trip to New York to attend a sales conference with I. H. Bennis, sales manager of the New York & New Jersey Lubricant Co.

Cornman Retires from Brown Instrument Co.

The Brown Instrument Co. announces that George W. W. Cornman, treasurer and manager of the service department of the company, will retire from business effective Aug. 8, 1930.

Mr. Cornman has been associated with the instrument business for 35 years, formerly being secretary and treasurer of the Keystone Electrical Instrument Co. When that organization was absorbed by The Brown Instrument Co., he became treasurer and a director of the present organization and was the active head of the service department, which was built up under his guidance.

The service department will be in charge of R. C. Kennan as manager, and E. T. Nahill as field supervisor.

Useful Catalogs

Electric Controlling Apparatus. An addition to the catalog sent out by Allen-Bradley Co., Milwaukee, Wis., gives details concerning electric controlling apparatus such as: Manual and automatic starters, mill and crane controlers, battery charging and testing equipment, rheostats, and accessories.

Electrical Equipment. In a new catalog, No. 2200, Crouse-Hinds Co., Syracuse, N. Y., gives descriptions and listings of its complete line of condulets, groundalets, plugs, and receptacles.

Electric Tramrail. Methods of overhead materials handling for textile plants are pictured in a bulletin from the Cleveland Crane & Engineering Co., Wickliffe, Ohio.

Electrical Apparatus. A series of pamphlets issued by the General Electric Co., Schenectady, N. Y., describes in detail arc-welding sets, magnetic controllers, and pressure governors.

Steel Buildings. The Truscon Steel Co., Youngstown, O., has sent out a circular which illustrates steel buildings for industrial and commercial uses.

Polyphase Motors. Multi-speed motors of the squirrel-cage induction type are described in a bulletin issued by the Century Electric Co., St. Louis, Mo.

Pump Accessories. Barrett, Haentjens & Co., Hazleton, Pa. Centrifugal pump priming, with notes on theory of suction lift, suction losses, submerged pumps, foot valve priming, and hand primer ratings.

Chlorine. The Mathieson Alkali Works, Inc., New York City. Chemical explanation and industrial uses of chlorine.

Wool Scouring. Procter & Gamble, Cincinnati, O. Relation of soap to textile dyeing and finishing processes.

Pulverizing Mills. Fuller Lehigh Co., Fullerton, Pa. Economic and mechanical advantages of pulverizing mills, both air and screen separation types.

Chemical Books. Chemical Publishing Co., Easton, Pa. Catalog of books on briquetting, filtration, oils, and organic and inorganic chemistry.

Turbines. De Laval Steam Turbine Co., Trenton, N. J. Characteristics, operation, and advantages of water turbines.

Pumps. Chicago Pump Co., Chicago. Detailed catalog of line, including fire, booster, turbine and belt driven and gasoline engine pumps, water systems, cellar drainers, and sewage ejectors.

Valves. The Ashton Valve Co., Boston, Mass. Book. Catalog 28, 2nd edition. Complete list of line of pop safety

and relief valves, pressure and vacuum gages, and locomotive and power-plant specialties.

Piping. The Linde Air Products Co., New York, N. Y. Oxwelded construction for piping services. Analysis of the use of oxwelding in steel and iron wrought piping, including building and residence and refrigeration piping.

Oil Cloths. Columbus Coated Fabrics Corp., Columbus, O. List including samples of printed glazes, damasks, scarfs, shelf oil cloths, and other numbers.

Chain Drives. Morse Chain Co., Ithaca, N. Y. How to design, install and maintain Morse silent chain drives, with pitches, horse power ratings, and dimensions.

Fulling Mills. James Hunter Machine Co., North Adams, Mass. Describes new fulling machine, that gives greater and more uniform production.

Automatic Slasher Control. Taylor Instrument Companies, Rochester, N. Y. Explains Tycos system of slasher control, including survey, recommendations, supervision of installation, and servicing.

Roller Bearings. Roller Bearing Co. of America. Booklet discussing Heliflex bearings, including shock absorbing characteristics; gives complete specifications and dimensions.

Electric Flow Meters. Brown Instrument Co., Philadelphia. Detailed instructions for installation and care of Brown electric flow meters, with illustrations and specifications.

V-Belt Pulleys and Sheaves. Pyott Foundry Co., Chicago. Series of six folders citing characteristics and service of V-belt pulley drives.

Airpainting. Paasche Airbrush Co., Chicago. Folder describes four new Paasche airpainting units—sprayers, air compressors and air airhose.

Tramrails. Cleveland Electric Tramrail Division of Cleveland Crane & Engineering Co., Wickliffe, Ohio. Discusses efficient methods of overhead materials handling.

Lathes. South Bend Lathe Works, South Bend, Ind. Hand Book No. 33, gives complete details on 152 jobs which junior mechanic can perform on the lathe.

Water-Tube Boilers. Boiler Engineering Co., Newark, N. J. Text and illustrations explain how to baffle correctly all types of water-tube boilers—horizontal and bent tube.

Testing Machines. Southwark Foundry and Machine Co., Philadelphia, Pa. Describes some representative models of light, medium, and heavy-duty standard universal testing machines with special testing equipment with the Emery weighing system.

New Books

THE COST OF LIVING IN THE UNITED STATES 1914-1929—M. Ada Beney, National Industrial Conference Board, New York. $2.50.

The cost of living is a subject of primary importance to producer and consumer, employer and wage earner, and to rich and poor alike. Hence the inquiries which the National Industrial Conference Board has been making since its inception as to how people spend their incomes, what goods and services they must and do buy, and the relative importance of each item to the total expenditures, form a complete treatise on the subject of interest to the community in general.

The present volume describes the several phases of living costs studied, discusses the numerous problems involved, and gives an account of various studies illustrative of the different types of measurements.

Of the major items for which wage earners have spent their money during the last 15 years, the rise of prices of clothing has been the most outstanding. Food follows closely after, though since 1920 food prices have been consistently below the general price level. However, the total cost of living has been growing less and less since the end of 1925. With occasional interruptions the cost of living has dropped from 68 per cent above that of July, 1914, to 61 per cent above.

INDUSTRIAL RELATIONS PROGRAMS IN SMALL PLANTS; 60 pages; National Industrial Conference Board, Inc., New York. Price $1.50.

This monograph is the report of a survey, prepared by the research staff of the National Industrial Conference Board, of the industrial relations activities in small plants. It contains information of value to executives of small establishments who are interested in organized methods of personnel administration. After outlining the scope of the investigation and stating the prevalence of various industrial relations in small plants, the authors discuss the factors influencing the extent of these activities, the difficulty of applying the programs, and the cost and benefits they provide. In the final chapter are suggested programs suited to small plants and the administration thereof.

DEUTSCHER FARBERKALENDAR FOR 1930; 253 pages; A. Ziemsen, Wittenberg. Price 5 marks.

The 39th edition of the "German Dyer's Calender" follows in general the form of preceding years. In addition to the usual tables giving symbols, formulas, and properties of chemicals used in dyeing and printing, there is a list of new dyestuffs and chemicals. Among the subjects covered by the special articles are those on Indanthrene dyestuffs, Variamine Blue B, mercerizing of cotton, Chloramine in bleaching, and manufacture of rayon.

STEAM GENERATION STEPS AHEAD; 102 pages; S. B. Gould, Fuel Engineering Co. of New York, New York.

The composite experience in the field of steam generation of the staff of the Fuel Engineering Co. of New York has been set forth in this book. Dealing with the practice of steam generation rather than with theoretical considerations, the information it gives should prove of interest to executives and power-plant engineers. Among the topics discussed are relation of plant design and operation to the coal market, characteristics of coal which modify power-plant performance controlling the major variables in cost of steam generation, and economic and engineering trends in steam generation.

PROCEEDINGS OF THE AMERICAN SOCIETY FOR TESTING MATERIALS, VOL. 29; American Society for Testing Materials, Philadelphia, Pa.

Part I of these proceedings comprises committee reports of the 32nd annual meeting of the society and the new and revised tentative standards. Of special interest to textile men are the proposed revision of tentative methods for identification of textile fibers and their quantitative examination in mixed goods, the tentative specification for chafer tire fabrics, and the tentative specifications and test method for asbestos tape for electrical purposes. Criticisms of these tentative methods are solicited.

TRADE ASSOCIATIONS; THEIR SERVICES TO INDUSTRY. By Joseph Henry Foth, Ph.D., Roland Press Co., New York. $4.50.

The growing importance of the trade association in American business is the theme of this searching study by Dr. Foth, professor of economics, University of Rochester. Dr. Foth traces the history of the trade association back to pre-Civil-War days, and describes its gradual change of function from a price-regulating organization to a body which takes a trade-wide and often intertrade view and aims at general business improvement. The book is particularly valuable at this time, considering the vast strides now being made by the trade association, and the vital position it has come to occupy in American industry. One section of particular interest describes the valuable work done by trade associations in supplying the government with statistics during the World War; at that period, the trade association was of service in helping to marshal the forces of industry needed for the prosecution of the war.

Textile Patents

CIRCULAR-knitting machines, High-splice attachment for. 1,771,344. Exilias E. Paquette, Woodstock, Ontario, Canada. Assigned to Scott & Williams Inc., N. Y.

COTTON cleaning machine. 1,771,624. Eugene C. Gwaltney, Laurinberg, N. C.

DOUBLE carpet weave. 1,771,973. Richard Greenleaf Turner, Worcester, Mass. Assigned to Crompton & Knowles Loom Works, Worcester, Mass.

DRYING form. 1,770,869. Paul J. Timberlake, Jackson, Mich.

DYEING yarn and the like, Machine for. 1,770,910. Arthur E. Byrd, Milwaukee, Wis. Assigned to Phoenix Hosiery Co., Milwaukee, Wis.

FABRIC. 1,771,588. Daniel S. Speese, Detroit, Mich.

LOOM. 1,771,603. Francis E. Ashton, Chester, Pa. Assigned to the Aberfoyle Mfg. Co., Chester, Pa.

LOOM let-off mechanism, Driving-rod connection for. 1,771,777. Harry A. Davis, Hopedale, Mass. Assigned to the Draper Corp., Hopedale, Mass.

LOOMS, Lock knife for. 1,771,565. Henry Langford, Woonsocket, R. I.

MARKING machine. 1,771,399. William H. Christophel, Norwood, Ohio. Assigned to The Wolf Machine Co., Cincinnati, Ohio.

PILE-fabric loom. 1,771,662. Edwin W. Stone, Longmeadow, Mass. Assigned to Bigelow-Sanford Carpet Co., Inc., Thompsonville, Conn.

PRINTED pile fabric. 1,771,341. Alfred F. McCollum, Bloomsburg, Pa. Assigned to The Magee Carpet Co., Bloomsburg, Pa.

SHUTTLE. 1,770,947. Milton H. Rubin, New York.

SKEINS, Drying apparatus for. 1,771,906. Albert Emile Villemey, Lyon-Villeurbanne, France.

SPINNING frame, Thread board and guide for. 1,771,923. Fred K. Hendrickson, Worcester, and Sigurd H. Helland, Whitinsville, Mass. Assigned to Whitin Machine Works, Whitinsville, Mass.

TEXTILE machine. 1,771,656. Edwin O. Roe, New Bedford, Mass. Assigned to National Spun Silk Co., New Bedford, Mass.

TEXTILE spinning machinery, Drawing or drafting roller for. 1,771,486. Walter Draper, Chorley, England.

TREATED raw cotton fiber and lubricant and conditioner therefor. 1,771,347. George W. Pressell, Philadelphia, Pa. Assigned to E. F. Houghton & Co., Philadelphia, Pa.

TWISTING and reeling artificial silk. 1,771,390. Arnold Bernstein, Mannheim, Germany. Assigned to Zellstofffabrik Waldhof, Mannheim-Waldhof, Germany.

WINDING machines, Thread coating, waxing, and impregnating attachment for. 1,771,568. Morris W. Becker, New York.